



MetroGIS

2003 - 2005

Business Plan

October 22, 2002

(Succeeds Business Plan Adopted on April 19, 2000)

*Prepared by Richardson, Richter & Associates, Inc. in conjunction with
the MetroGIS Staff Coordinator and oversight and guidance from the
MetroGIS Business Planning Workgroup*

**MetroGIS 2003-2005 Business Plan
Policy Board Action
October 22, 2002**

Action and Discussion Items (Excerpt from Meeting Summary)

5b. MetroGIS 2003-2005 Business Plan

Will Craig, Chair of the Coordinating Committee, summarized the Committee's September 25th recommendation to approve the Plan enclosed with the agenda materials and introduced Kathie Doty, MetroGIS Business Planning Consultant with the firm Richardson, Richter & Associates, Inc., to comment on the key components of the recommended Plan.

Ms. Doty summarized the five assumptions upon which the proposed Plan is based and asked if the Board had any concerns or questions. None of the Board members commented. Ms. Doty then explained several of the key strategies presented in the Executive Summary. Chairperson Reinhardt commented that there is nothing of policy substance included in the proposed Plan that the Board had not over the past several months previously discussed and provided direction for.

Member Siegfried requested clarification on the current revenue received from cost recovery for data related expenses. Coordinating Committee Vice-Chair and Business Planning Workgroup member Harper stated that the County Producer Workgroup created by the Board at its July 30 meeting is currently investigating this matter in conjunction with its work on a collaborative strategy for distribution of parcel data to non-government entities. She noted that the results of the Workgroup's investigation should be ready to share with the Board at its January meeting. Kathie Doty, MetroGIS Business Planning Consultant and a member of the County Producer Workgroup staff support team commented that in the preliminary research conducted for the Business Plan, it was learned that most of the GIS-related revenue being realized is coming from sales of map products, as opposed to digital parcel data. She also noted that staff from each of the counties generally concur that cost recovery for digital parcel data generates reality little revenue.

Member Branning asked for clarification of the statement on Page viii in the Executive Summary concerning the proposed \$75,000 data maintenance payment to counties. Staff agreed to modify the statement to clarify that a total of \$75,000 per year for each of the three planning period years (2003-2005) is proposed to be allocated among the counties.

Chairperson Reinhardt commented that after the Plan had been mailed to Board members last week, several editing and clarifying modifications had been suggested. She requested, and Board members agreed, to leave the decision as to whether the changes should be included in the final document up to the Chair's discretion.

Motion: Member Siegfried moved and Member Branning seconded to: a) adopt the proposed MetroGIS 2003-2005 Business Plan, dated October 22, 2002, subject to the clarification requested by Member Branning concerning the proposed annual data maintenance funding and b) direct staff to forward the Plan to the Metropolitan Council, serving in its capacity as primary sponsor, for approval. Motion carried ayes all.

Board members concluded there is no need to seek approval of the approved Plan from the organizations represented on the Policy Board other than the Metropolitan Council. The Council was distinguished from the others since continued funding and staff support for MetroGIS's core functions is being sought from the Council.

Chairperson Reinhardt recognized the members of the Business Planning Workgroup (David Arbeit, Will Craig, Kathie Doty, Rick Gelbmann, Jane Harper, and Randall Johnson) and thanked them and the Coordinating Committee for their efforts to prepare this Plan, noting that the Plan sets an ambitious but doable course of action for MetroGIS.

ACKNOWLEDGEMENTS

MetroGIS Policy Board

Commissioner Victoria Reinhardt, Chair, Ramsey County
Commissioner Jim Kordiak, Vice Chair, Anoka County
Commissioner John Siegfried, Carver County
Commissioner Willis Branning, Dakota County
Commissioner Randy Johnson, Hennepin County
Commissioner Joseph Wagner, Scott County
Deputy Administrator Molly O'Rourke, Washington County
Councilmember Gary Schiff, Association of Metropolitan Municipalities - Large Cities (Minneapolis)
Councilmember Terry Schneider, Association of Metropolitan Municipalities – Other Cities (Minnetonka)
Board Member Conrad Fiskness, Metro Chapter of MN Association of Watershed Districts
Councilmember Roger Williams, Metropolitan Council
Superintendent Antoinette (Toni) Johns, Technology Information Education Services (TIES)

MetroGIS Coordinating Committee

Clifton Aichinger, Ramsey-Washington-Metro Watershed District (MWAD).
David Arbeit, MN Land Management Information Center (LMIC)
William Brown, Hennepin County
Larry Charboneau, The Lawrence Group
Donald Cheney, Association of Metropolitan Municipalities - Large Cities (St. Paul)
David Claypool, Ramsey County
Bob Cockriel, Association of Metropolitan Municipalities - Other Cities (Bloomington)
Eli Cooper, Metropolitan Council
Will Craig, University of Minnesota Center for Urban and Regional Affairs (CURA)
Dave Drealan, Carver County
Joella Givens, Mn/DOT
Jane Harper, Washington County
Jim Hentges, Scott County
Brad Henry, URS/BRW
Rick Gelbmann, Metropolitan Council
Mark Kill, Metropolitan Airports Commission
Randy Knippel, Dakota County
Al Laumeyer, Minnegasco/Reliant Energy & Allan Radke, Xcel Energy (*share seat on a rotating basis*)
Steve Lehr, CB Richard Ellis
Les Maki/Bart Richardson, MN DNR
Sandra Paddock, Wilder Research
Nancy Read, Metropolitan Mosquito Control Commission
Gary Swenson, Anoka County
Ronald Wencil, USGS
Lee Whitcraft, TIES

MetroGIS Business Planning Workgroup

William Craig, Chair, MetroGIS Coordinating Committee (U of M CURA)
David Arbeit, Minnesota Land Management Information Center
Rick Gelbmann, Metropolitan Council
Jane Harper, Vice-Chair, MetroGIS Coordinating Committee (Washington County)

Staff Support Team

Randall Johnson, MetroGIS Staff Coordinator
Kathie Doty, Richardson, Richter & Associates, Inc.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	iv
1.0 INTRODUCTION AND BACKGROUND	1
1.1 What is GIS?.....	1
1.2 Why is Collaboration Important?	1
1.3 MetroGIS: An Overview.....	1
1.4 2003 - 2005 Business Planning Process	5
2.0 CURRENT SITUATION	6
2.1 MetroGIS Products and Services.....	6
2.2 Current Staffing	8
2.3 Current Funding and Primary Sponsor	9
2.4 Outreach	9
2.5 Performance Measurement	10
3.0 CHALLENGES AND STRATEGIES	11
3.1 Challenges Related to Ongoing work.....	11
3.2 Challenges Related to Emerging Issues	16
4.0 OPERATIONAL IMPLICATIONS FOR 2003 – 2005	20
4.1 Background and General Assumptions	20
4.2 Projected Expenditure Levels Associated with Recommended Strategies	21

APPENDICES

Appendix A: MetroGIS Functions	
Appendix B: Results of Recommendations From Previous Business Plan	
Appendix C: High Level Outreach Strategy for MetroGIS	
Appendix D: Priority Common Information Needs and Related Regional Datasets	
Appendix E: Major Tasks and Reporting Responsibilities for MetroGIS Staff	
Appendix F: Summary of Interviews with County Data Producers	
Appendix G: Recommended Tactics for Implementing Strategies for Supporting the MetroGIS Mission	
Appendix H: Chronology of Events Related to Parcel Dataset Distribution	
Appendix I: Summary of Interviews with Private Sector	
Appendix J: Preliminary Inventory of County Geodata Applications	

EXECUTIVE SUMMARY

Recent Accomplishments of MetroGIS

These are exciting times for MetroGIS. Considerable progress has been made in implementing the functions necessary to achieve MetroGIS's ambitious mission:

The MetroGIS Mission is to provide an ongoing, stakeholder-governed, metro-wide mechanism through which participants easily and equitably share geographically referenced data that are accurate, current, secure, of common benefit and readily usable.

MetroGIS stakeholders now have more ready access to geospatial data produced by others, and sharing of commonly needed geodata is resulting in higher quality data at a lower cost. MetroGIS continues to provide an important forum for identifying opportunities and implementing solutions for improving ease of access and sharing of better quality geodata.

MetroGIS policies and practices are also helping shape statewide geodata policy and are recognized nationally as a model for regional geodata collaboration. According to Rick Gelbmann, GIS Manager for the Metropolitan Council,

“MetroGIS activities have built an information infrastructure that has nurtured one of the most comprehensive geospatial data environments in the nation. This was acknowledged by Peter Calthorpe in a June 2002 presentation to the Metropolitan Council when he commented that the Smart Growth Twin Cities Project could not have been completed at the level of detail without the GIS data provided by the Council. The Council’s ability to provide this detailed data depends in part on the data sharing agreements fostered by MetroGIS.”

Policies and practices needed to operationalize two of MetroGIS key functions are now in place:

- 1) A state-of-the-art, Internet-enabled geodata discovery and distribution mechanism (DataFinder) is operational and is a registered node of the National Geospatial Data Clearinghouse, and
- 2) MetroGIS's organizational structure supports high levels of participation, which fosters collaboration on common geodata needs.

Significant progress has also been made on developing solutions to address common information needs of stakeholders. Regional solutions¹ have either been implemented or progress is well underway for eleven of thirteen priority common information needs. Two priority common information needs have not yet been addressed (Land Regulations and Rights to Property), and may be re-assessed to determine if they should remain at the priority level.

¹ Regional solutions to common information needs are Policy Board-endorsed data specifications for one or more regional datasets that address common information needs, custodian roles and responsibilities, and appointment of a willing organization(s) with expertise to carry out the endorsed roles and responsibilities. See <http://www.metrogis.org/data/about/index.shtml#overview> for more information.

Accomplishing outcomes related to the key MetroGIS functions was largely the result of the successful completion of numerous tasks and activities identified in the April 2000 Business Plan, which was developed as a blueprint for the period 2000 - 2003.

Recognition

Over the past few years, MetroGIS has received the following awards:

- URISA's² prestigious Exemplary Systems in Government (ESIG) Award³ for Enterprise Systems (2002)
- Grand prize winner of the ESRI/National Geographic International Geography Network Challenge (2001)
- Two State of Minnesota Governor's Council on Geographic Information Awards for Exemplary Projects (1998 and 1999)⁴
- Minnesota Chapter of the American Planning Association Special Merit Award for an Outstanding Planning Tool (2002)⁵
- First operational substate geodata collaborative in the country to be recognized as an I-Team (2002)
- Invitation to present at the Global Spatial Data Infrastructure Conference in Budapest Hungary to share keys to success and lessons learned (2002)

In 2001, the MetroGIS Staff Coordinator co-authored "*Lessons from Practice: A Guidebook to Organizing and Sustaining GeoData Collaboratives*", a guidebook to help prospective geodata collaborations organize and improve communication among existing collaboratives. The document is a compilation of case studies and research findings regarding establishing and sustaining a successful geodata collaborative. The Twin Cities MetroGIS collaborative and Ramsey County GIS Users Group are included as examples of successful geodata collaborations. The document was published in September 2001 by the GeoData Alliance.

Challenges for 2002 and Beyond

Notwithstanding MetroGIS's accomplishments, new challenges have emerged since the adoption of the April 2000 Business Plan. Further, there was a need to update strategies to address challenges identified in the April 2000 Business Plan to ensure MetroGIS activities continue to address stakeholders' changing geodata-related needs. A planning process was undertaken that included analysis of various efforts in place since the adoption of the April 2000 Business Plan (e.g. the parcel data pilot projects, performance measurement plan, outreach plan), as well as input and direction from the MetroGIS Coordinating Committee and policy direction from the MetroGIS Policy Board.

Through this planning process, challenges related to ongoing activities as well as emerging issues have been identified, and strategies to address them have been developed. The 2003 - 2005 Business Plan also includes operational impacts associated with the implementation of strategies

² Urban and Regional Information Systems Association (<http://www.urisa.org>) is comprised over 7000 individuals and organizations that utilize and develop geospatial technology.

³ See http://www.metrogis.org/esig_2002.pdf for the application, which provides the information requested by URISA to evaluate MetroGIS's accomplishments against its expectations for ESIG recipients.

⁴ See <http://www.metrogis.org/about/awards/index.shtml> for an explanation of each of these awards.

⁵ See <http://www.metrogis.org/about/awards/index.shtml> for an explanation of this award.

outlined in the Plan.

Recommendations

Recommendations have been developed through the planning process that reflect analysis of current stakeholder needs, direction from the MetroGIS Policy Board, input from the MetroGIS Coordinating Committee and Metropolitan Council management, and oversight by the MetroGIS Staff Coordinator.

Several key assumptions also underlie the recommended strategies, as follows:

- ◆ The need for regional collaboration on geodata projects will continue and may be more important than ever.
- ◆ The Metropolitan Council will continue to be a primary sponsor, and provide funding and staff support for core MetroGIS activities.
- ◆ Partnerships, or cost-sharing models, will be considered in determining funding options for future commonly needed geodata projects.
- ◆ MetroGIS will continue to rely on stakeholders for development of data and therefore the pace of data development will be set largely by stakeholders.
- ◆ The current organizational structure for MetroGIS is effective with regard to accomplishing the MetroGIS mission, and therefore, no significant changes are required.

Strategies that respond to identified challenges and ways to implement these strategies are recommended in this Plan. Key strategies that reflect new or revised direction for MetroGIS as well as operational implications are as follows:

1) Addressing GIS Issues through Stronger Collaboration among Data Producers

MetroGIS should provide a forum for producers to work jointly to identify barriers and develop solutions that will serve the purpose of making quality geodata readily available to interested users. Specifically, this forum should support:

- The determination of whether parcel data and attribute data should be distributed through MetroGIS to interested non-public entities, and if so, what procedures and practices should be established to distribute parcel data and attributes to interested users.
- The determination of the value of developing an eCommerce function to allow for charging for parcel data and other datasets that producers wish to distribute for a fee.
- Clarification and definition of the scope of work appropriate for MetroGIS concerning facilitation of regional solutions to commonly needed geodata applications.

2) Continuing to Work with Others to Leverage MetroGIS Investments

➤ DataFinder Café

The MetroGIS investment in DataFinder Café should be leveraged by working with appropriate State interests to ensure coordination with the State's geodata infrastructure. For example, work with the state Land Management Information Center (LMIC) to integrate DataFinder Café into Minnesota GeoIntegrator. In addition, MetroGIS should continue to

ensure that data producers are aware of opportunities to distribute their data through DataFinder Café.

➤ Endorsement of Datasets Developed by Others

MetroGIS should consider requests for regional endorsement of datasets developed by others that are related to common information needs and establish procedures and criteria to guarantee quality and relevance of endorsed datasets.

3) *Operational Implications of Implementing Strategies*

In order to implement strategies outlined in the 2003 - 2005 Business Plan, the Plan also includes a section outlining operational implications (Section 4.0). The Plan recommends that the present staffing level be maintained, that consulting services be reduced, and that data maintenance payments remain at a total of \$75,000 per year to county data producers over the period from 2003 - 2005..

The funding level outlined in Section 4 will ensure funding for core MetroGIS services, but may not allow for the full implementation of strategies outlined in this Plan. Therefore, a partnership model for funding special GIS projects is suggested for the future, based on benefits derived from various initiatives.

Conclusion

In conclusion, the 2003 - 2005 Business Plan was prepared as a blueprint for MetroGIS to ensure that work performed over the next three years is relevant and beneficial to the MetroGIS community, and supportive of the MetroGIS mission.

1.0 INTRODUCTION AND BACKGROUND

1.1 What is GIS?

Good decisions are based on good information. Government, nonprofit, and private organizations use Geographic Information System (GIS) technology to integrate data about people, places and things important to decision making. GIS is an effective tool to evaluate and visualize relationships between features and occurrences that can be mapped, e.g. highways, parcels, natural features, and municipal boundaries. A GIS is a computerized database management system for the capture, storage, retrieval, analysis, and display of data defined by location.

GIS technology provides benefits to organizations that use it in their daily business functions. GIS helps government and other interests plan for growth and change, and monitor patterns and trends in jobs, housing, transportation systems, and array of other programs.

1.2 Why is Collaboration Important?

Organizations that elect to collaborate with others on common geospatial needs and opportunities can leverage their investment in geodata and benefit substantially from efficiencies gained through sharing of data and knowledge⁶. Benefits that can accrue for organizations that collaborate on common geospatial needs and opportunities include:

- Reduced data costs
- Improved data quality
- Minimized data conflicts
- Improved participant operations
- Leveraged technology investments
- Reduced project costs through collective bidding
- Strengthened commitment to standards
- Improved support for cross-jurisdictional decision making
- Strengthened working relationships fostering broader cooperation

MetroGIS is seen as a leader in the area of geodata collaboration. Section 2.4 of this Plan shows accomplishments that reflect this leadership role.

1.3 MetroGIS: An Overview

1.3.1 What is MetroGIS?

MetroGIS is a voluntary collaboration of organizations serving the Minneapolis-St. Paul Metropolitan Area that use GIS technology to carry out their business functions. The discussions that resulted in the establishment of MetroGIS began in the fall of

⁶ Source: Lessons From Practice: A Guide to Organizing and Sustaining Geodata Collaboratives (2001), http://www.metrogis.org/documents/reports/lessons_entire.pdf.

1995. Since its inception, over 470 people, representing a wide variety of disciplines and organizations, have helped MetroGIS evolve to where it is today.

MetroGIS's primary purpose is to promote and facilitate widespread sharing of geospatial data among its stakeholder organizations. More specifically, the goal is to institutionalize sharing of accurate and reliable geospatial data. In doing so, MetroGIS data users and producers share in the efficiencies of having geodata easily accessible, in the form needed, when it is needed.

The MetroGIS mission statement, as endorsed by the organizations represented on the MetroGIS Policy Board in the fall of 1996, is:

"To provide an ongoing, stakeholder-governed, metro-wide mechanism through which participants easily and equitably share geographically referenced data that are accurate, current, secure, of common benefit and readily usable."

The desired outcomes of MetroGIS include improving participant operations, minimizing stakeholder expense and duplication of effort, and supporting cross-jurisdictional decision making.

1.3.2 MetroGIS Functions / Core Services

In 1999, the MetroGIS community identified eighteen (18) functions believed to be appropriate for MetroGIS to support (Appendix A). Five (5) "mission-critical" functions were defined and adopted as a component of the 2000 Business Plan:

- Promote and endorse voluntary policies, which foster coordination of GIS among the region's organizations.
- Facilitate data sharing agreements and licensing among MetroGIS stakeholders.
- Provide a directory of regional data within the region and a mechanism for search and retrieval of GIS data (i.e. maintain and enhance DataFinder). The goal is to provide a single point with information on how to search for sources of data.
- Identify unmet GIS needs with regional significance and act on these needs.
- Develop and endorse standards for GIS data content, data documentation, and data management for regional datasets.

These mission critical functions have been translated into core services provided by and through MetroGIS. Core services include:

- Supporting MetroGIS DataFinder (www.datafinder.org) (see Section 2.1.1)
- Overseeing solutions to common information needs (See Section 2.1.2)
- Fostering GIS coordination among stakeholders (See Section 2.1.3)

1.3.3 MetroGIS Stakeholders and Organizational Structure

The primary stakeholders of MetroGIS are the seven metropolitan counties, and nearly 300 cities, school districts and water management organizations, the

Metropolitan Council, other regional agencies. State and federal agencies also participate in the activities of MetroGIS. Information about MetroGIS membership is available on the MetroGIS website, at

<http://www.metrogis.org/about/index.shtml#who>.

The MetroGIS Policy Board, created in January 1997, provides policy direction for the MetroGIS organization. The Board is comprised of twelve (12) elected officials, each representing a core stakeholder or core stakeholder community: each of the seven metropolitan counties, Association of Metropolitan Municipalities (AMM), Metropolitan Chapter of the Minnesota Association of Watershed Districts (MAWD), Technology Information Educational Services (TIES - school districts), and the Metropolitan Council.

The Board is supported by a Coordinating Committee and a Technical Advisory Team. The Coordinating Committee, comprised of managers and administrators from stakeholder organizations, recommends courses of action to the Policy Board concerning design, implementation, and operation of MetroGIS

(<http://www.metrogis.org/teams/cc/index.shtml>). The Technical Advisory Team, comprised of technical staff from stakeholder organizations, is responsible for recommending technical strategies and mechanisms and framing policy needs for consideration by the MetroGIS Coordinating Committee related to resolving data access, data content, and standards obstacles

(<http://www.metrogis.org/teams/ta/index.shtml>). MetroGIS Operating Guidelines govern the responsibilities and composition of the Board and its supporting structure (http://www.metrogis.org/about/history/ops_guidelines.pdf).

Primary Sponsor: Metropolitan Council

In 1994, the Metropolitan Council concluded that a parcel-based GIS was needed to support its mission, and chose a collaborative approach with local government partners as the most prudent course of action. Championing a regional GIS collaborative is consistent with the Council's over-arching corporate goal of fostering collaborative solutions with local government partners.

The Metropolitan Council has served as primary sponsor of MetroGIS since MetroGIS's inception in 1995. From 1995-2001, the Council invested over \$3.2 million to build DataFinder and DataFinder Café, to fund numerous special projects that enhance data quality and access, and to foster and facilitate geodata collaboration via MetroGIS's collaborative forum. The Metropolitan Council provides

the primary staff support, in accordance with its role as primary sponsor of the MetroGIS initiative.

The Metropolitan Council compiles and maintains regional datasets (e.g., land use, census geography / TAZ, road centerline and census address range, soils, imagery, administrative boundaries), and designs, finances, and coordinates projects that address its internal GIS and MetroGIS program needs.

In addition, the Council directly funds activities that provide significant benefit to the MetroGIS community:

- The Council pays a maintenance fee of \$50,000 per year to secure, for the MetroGIS community, access and quarterly updates to The Lawrence Group Street Centerline dataset. This means that essential street data developed by a private sector interest are made available at no cost to the MetroGIS community.
- The Council provides hardware, software, and application maintenance support for DataFinder and for the MetroGIS information sharing website (estimated cost of \$9,000 per year).

Other Stakeholder Involvement

In addition to the Council investment in MetroGIS, significant contributions of staff time have been made by stakeholder organizations for development or acquisition of data solutions to address common information needs and for participation in regional geodata collaboration.

1.3.4 MetroGIS Guiding Principles

Since MetroGIS stakeholders need geodata for a variety of purposes and use it in a variety of forms, the principal mode of operating for MetroGIS is to provide a forum for stakeholders to develop ways of meeting common geodata needs, and to achieve greater internal organizational efficiency as well. In doing this, MetroGIS is guided by several fundamental principles, summarized as follows

(<http://www.metrogis.org/about/index.shtml#principles> provides a complete discussion of guiding principles):

- *Secure Champions*
- *Actively Involve Policy Makers*
- *Promote Understanding*
- *Seek Consensus on Policy Decisions*
- *Represent Diverse Perspectives*
- *Document Stakeholder Benefits*
- *Maintain Focus on Common Business Information Needs*
- *Focus on Stakeholder Benefits*

- *Acknowledge Fair-Share Contribution Options*
- *Align with Internal Business Needs*
- *Maintain an Institutional Memory*
- *Connect with Geodata Initiatives on the State and National Levels*

1.4 2003 - 2005 Business Planning Process

In 1999, as a result of the Fair Share Financial Model and Benefits Studies (http://www.metrogis.org/about/business_planning/index.shtml#part3), the MetroGIS Policy Board directed the Coordinating Committee to prepare a business plan to guide MetroGIS as it transitioned from a definition and design phase to an ongoing operational entity. The resulting business plan was unanimously accepted by the MetroGIS Policy Board on April 19, 2000 and unanimously endorsed by MetroGIS's primary sponsor, the Metropolitan Council, in June 2000.

The April 2000 MetroGIS Business Plan covered the period from 2000 to 2003, and addressed several issues important to making a transition from defining the desired form and function of MetroGIS to setting policy for day-to-day operation of a maturing collaborative.

The 2000 business planning process provided a forum for:

- Policy discussions on strategies for developing and distributing regional datasets to both the public and private sectors,
- Continuing a coordination role while seeking other funding to meet data development needs,
- Examining staffing requirements, and
- Evaluating a new legal organizational structure and developing budgets and stable financing mechanisms to support the mission of MetroGIS in coordinating regional GIS functions.

A summary of the actions taken to address April 2000 Business Plan recommendations is contained in Appendix B.

In January 2001, the Policy Board adopted a work plan calling for a Business Plan Update project, beginning in 2002. A working group of the Coordinating Committee was created to work with the staff support team to identify challenges facing MetroGIS and to formulate responsive and appropriate strategies to address them. In addition, the 2003 - 2005 Business Plan builds upon lessons learned from the crucial parcel data pilots that were completed in 2001, and addresses significant challenges that came to light as these pilots were in progress. The 2002 planning effort also completed tasks such as the development of an Outreach/Marketing Plan (Appendix C) and a Performance Measurement Plan (http://www.metrogis.org/benefits/perf_measure/index.shtml), tasks that were premature at the time of the 2000 planning effort. The planning process included an assessment of operational implications associated with the 2003 - 2005 Business Plan in terms of projected level of expenditures and funding sources for the years 2003 to 2005.

2.0 CURRENT SITUATION

2.1 MetroGIS Products and Services

MetroGIS activities focus on supporting products and services related to its mission. These products and services are coordinated and facilitated through MetroGIS, and fall under three main categories: facilitating geodata discovery and distribution, facilitating regional solutions that respond to common information needs; and providing a forum for sharing of geodata knowledge.

2.1.1 Data Discovery and Distribution: DataFinder (www.datafinder.org)

MetroGIS DataFinder provides a state-of-the-art, Internet-based mechanism for sharing GIS data. It addresses one of the MetroGIS priorities - to identify the mechanisms for indexing, describing, and accessing current, accurate, secure and usable geographically referenced graphic and associated attribute data. DataFinder features include standardized metadata, Web Mapping Services, a mechanism that allows users to download complete and partial spatial datasets, and interactive maps for online data browsing. Any MetroGIS stakeholder organization can use DataFinder to post its metadata, as well as its geodata if it chooses to do so. DataFinder is a registered node of the National Geospatial Data Clearinghouse.

DataFinder data distribution capabilities were substantially expanded in spring 2002 with the addition of subsetting capability for downloading data via the Internet. This new capability, called DataFinder Café, allows users to self-define geographic areas of interest, select among available data layers and attributes, and to obtain desired data in a variety of common data formats. A security function was also added to support distribution of data for which access rules vary depending on the affiliation of the requester. The Metropolitan Council financed this project on behalf of the MetroGIS community and also hosts this Internet-based application.

The new functionality provided by DataFinder Café is consistent with the MetroGIS mission to provide a “metro-wide mechanism through which participants easily and equitably share geographically referenced data”. DataFinder Café can be accessed at <http://www.datafinder.org/cafe.asp>.

Negotiations were initiated in mid-2002 with the Minnesota Land Management Information Center (LMIC) to explore leveraging the investment made in DataFinder Café by extending its capabilities statewide (Minnesota GeoIntegrator project), thereby ensuring integration into the state’s geodata infrastructure and pursuit of enhancements as a community.

Significant progress has been made in this area with over 70 datasets freely available via DataFinder, including several regionally endorsed datasets that address common information needs of the MetroGIS community. Several organizations are beginning to take advantage of DataFinder as a tool to support their internal and external data distribution needs, which represents a growing opportunity for data producers. Data downloads from MetroGIS DataFinder have been increasing over the past year, up to over 750 sessions per month. This activity is expected to increase now that parcel and planned land use data can be "subsetting" and downloaded via the Internet. No formal study has been conducted to estimate cost savings associated with use of this one-stop geodata search and retrieval tool, but anecdotal statements indicate that the potential is significant and expected to increase as its use becomes more widespread.

2.1.2 Solutions to Common Information Needs - Regional Datasets and Facilitating Access to Geospatial Data

In May 1997, the Policy Board endorsed thirteen priority business information needs for the MetroGIS community

(http://www.metrogis.org/data/about/index.shtml#identify_needs). MetroGIS has played a key role in the conceptual design and facilitation of the development of regional datasets to address these common information needs. In addition to supporting the development of regional data solutions to common information needs, MetroGIS has initiated efforts to streamline access procedures and standardize policies among the producers.

The status of work on developing data solutions for common information needs is shown in Appendix D. Regional solutions are expected to be completed for eleven of the thirteen priority common information needs identified by the end of 2003. Two of the common information needs (Land Regulations and Rights to Property) have not been addressed to date, and need to be reassessed. In addition, some of the other 87 information needs, as well as other information needs that have been identified since that time, will likely be added to the list of priority common information needs as a result of a reexamination of common information needs. Section 3.1.1 discusses this challenge and strategies to address it.

In addition to facilitating the development of regional data solutions to common information needs, MetroGIS facilitates ready access to geodata. A key approach is to standardize access requirements and related documents, such as licenses for data with distribution restrictions.

In March 2002, the Metropolitan Council, on behalf of the MetroGIS community, executed second generation data sharing agreements with each of the seven metropolitan counties to foster common access rules for parcel data, subject to distribution restrictions.⁷ These agreements are in effect through December 31, 2003. The result is that data users can obtain access to all seven counties' data with two licenses, as opposed to seven, from a centralized location. This has reduced access time, legal reviews, and administrative processing. These agreements must be renegotiated in 2003 (see Section 3.1.4).

2.1.3 Sharing of Geodata Knowledge

Each Policy Board meeting includes a demonstration of GIS technology. Other current activities to support sharing of knowledge include providing an information sharing update as a standard component of each Board, Committee, and Advisory Team agenda; promoting GIS and MetroGIS activities via numerous committees on which members serve; disseminating information through email broadcasts; and having a presence at state and national conferences.

MetroGIS maintains a website at <http://www.metrogis.org> for information and knowledge sharing. At this site, all aspects of the MetroGIS initiative are documented, and the website serves as an institutional memory for the organization. Over the past year, this site recorded an average of 2,045 user sessions per month. This sharing of knowledge and lessons learned contributes to other initiatives beyond the Twin Cities area such as emerging efforts in the surrounding counties, in other parts of the state, and within the state's geodata initiatives. Other entities report that they are implementing practices that evolved from the MetroGIS experience.

MetroGIS's Outreach Plan and guiding principles emphasize county-based GIS users groups as an important means of fostering knowledge sharing.

2.2 Current Staffing

While MetroGIS is supported through significant contributions of staff expertise from many organizations, the key coordination functions of MetroGIS require staffing with individuals whose time is dedicated to MetroGIS.

The April 2000 Business Plan recommended 3.25 full-time equivalent positions (FTEs), together with outsourcing for supplemental support expertise and resources to staff a mature

⁷ See <http://www.metrogis.org/about/history/sharing.shtml> for a complete explanation of the initial and second-generation agreements.

MetroGIS. This level of support was and continues to be acceptable to the Metropolitan Council, MetroGIS's primary sponsor.⁸

The contingent of 3.25 FTE has proven adequate to achieve the program objectives set forth in the 2000 Business Plan, although the configuration of the staffing has changed since the Plan was adopted. With the technical emphasis beginning to shift in 2001 away from defining policy and desired functionality, to more operational oversight of DataFinder and regional datasets, the duties of the former Technical Coordinator were divided among several GIS technical specialists and the MetroGIS Administrative Technician.

Table 1: Current MetroGIS Staffing

Job Title	FTEs
Staff Coordinator	1.0
Administrative Technician	1.0
DataFinder Manager	.5
Data Management and Technical Support	.75
Total	3.25

Appendix E outlines major duties for which MetroGIS staff are responsible.

In addition to the dedicated support contingent of 3.25 full-time equivalent staff, outsourcing to assist with outreach, performance measures, business planning and special projects, has been a key tactic used to achieve program goals, and to provide timely and effective support.

2.3 Current Funding and Primary Sponsor

The April 2000 Business Plan called for the Metropolitan Council to continue to serve as the primary sponsor of MetroGIS through 2003, at an average annual investment of approximately \$400,000 for staff and non-staff support. It is anticipated that the Council will continue to be a primary sponsor of MetroGIS through 2005. Section 4.3 addresses funding options for 2003 to 2005.

2.4 Outreach

Communication within the MetroGIS stakeholder community is essential to ensure the community is aware of MetroGIS objectives, projects, products and services, ultimately to avoid duplication and improve efficiencies. The Board endorsed an outreach strategy (Appendix C) on April 11, 2001.

MetroGIS also participates in statewide and national efforts to achieve GIS coordination on a larger scale. Examples of such coordination include MetroGIS's active involvement at the

⁸ See Section 2.4 and http://www.metrogis.org/about/affiliations/index.shtml#met_council for more information about the Metropolitan Council's primary sponsor role.

staff and committee/board member levels in National Spatial Data Infrastructure (NSDI) Framework Workshops, participating on the drafting committee that launched the National Geodata Alliance (GDA), serving on the initial GDA National Board of Trustees, participating in several MN Governor's Council on Geographic Information workgroups, and MetroGIS's designation as the first operational substate I-Team in the country.⁹

In recent years, MetroGIS has received the following recognition and awards that support continued outreach efforts:

- URISA's¹⁰ prestigious Exemplary Systems in Government (ESIG) Award¹¹ for Enterprise Systems (2002)
- Grand prize winner of the ESRI/National Geographic International Geography Network Challenge (2001)
- Two State of Minnesota Governor's Council on Geographic Information Awards for Exemplary Projects (1998 and 1999)¹²
- Minnesota Chapter of the American Planning Association Special Merit Award for an Outstanding Project (2002)¹³
- First operational substate geodata collaborative in the country to be recognized as an I-Team (2002)
- Invitation to present at the Global Spatial Data Infrastructure Conference in Budapest Hungary to share keys to success and lessons learned (2002)

In 2001, the MetroGIS Staff Coordinator co-authored "*Lessons from Practice: A Guidebook to Organizing and Sustaining GeoData Collaboratives*", a guidebook to help prospective geodata collaborations organize and improve communication among existing collaboratives. The document is a compilation of case studies and research findings regarding establishing and sustaining a successful geodata collaborative. The Twin Cities MetroGIS collaborative and Ramsey County GIS Users Group are included as examples of successful geodata collaborations. The document was published in September 2001 by the GeoData Alliance.

2.5 Performance Measurement

In April 2001, the MetroGIS Policy Board adopted a Performance Measurement Plan to enable the organization to more clearly state to its stakeholders what it expects to accomplish, and to demonstrate accountability for results. MetroGIS chose to establish this Plan for a number of reasons, including that MetroGIS as an organization had matured, a Business Plan had been developed as a blueprint for future activities, and there was a need to clarify what constitutes "success" for MetroGIS.

⁹ See <http://www.fgdc.gov/I-Team/> for an explanation of the Office of Management and Budget's I-Team program, which seeks to align geodata resources controlled by federal agencies with local geodata needs when consistent with federal agency needs.

¹⁰ Urban and Regional Information Systems Association (<http://www.urisa.org>) is comprised of over 7000 individuals and organizations that utilize and develop geospatial technology.

¹¹ See http://www.metrogis.org/esig_2002.pdf for the application, which provides the information requested by URISA to evaluate MetroGIS's accomplishments against its expectations for ESIG recipients.

¹² See footnote number four.

Measures were developed for three major outcome areas:

- Outcomes for Data Users: ease of discovery and access, and current data
- Outcomes for Data Producers: improved efficiency and staff time savings
- Ultimate Outcomes – Improved decision-making and better service to the public

Ten (10) key measures, including both quantitative and descriptive measures, were established. The approved Plan is on the MetroGIS website at: http://www.metrogis.org/benefits/perf_measure/index.shtml. The first report to the MetroGIS Coordinating Committee on progress against key measures will occur in December 2002, and to the Policy Board in early 2003.

3.0 CHALLENGES AND STRATEGIES

While most of the April 2000 Business Plan recommendations have been addressed, some remain unresolved and required further analysis and reassessment. In addition, changes in technological capabilities and user needs raise new challenges for MetroGIS. For these reasons, the 2003 - 2005 Business Plan update focuses on identification of key challenges facing MetroGIS through 2005, and the development of strategies that serve as the blueprint for MetroGIS activity in coming years. Developing tactics to carry out strategies will generally be left to the annual work planning process. The challenges identified were divided into 2 groups: those relating to ongoing work, and those arising from emerging issues facing MetroGIS.

3.1 Challenges Related to Ongoing work

Within the confines of the existing MetroGIS mission, there are challenges to ensure that the mission is met. These challenges focus attention on issues that require special attention over the next few years, and strategies for addressing those challenges. This list of challenges is not intended to capture the full range of MetroGIS activities. Six (6) areas have been identified:

3.1.1 Common Information Needs

Challenge: To ensure that common information needs continue to be accurately identified and appropriately met.

In 1996, MetroGIS undertook a comprehensive process to gain stakeholder input regarding identification of organizational information needs that are common to stakeholders. This process also prioritized the common information needs, resulting in a list of 13 common information needs that were considered “critically important” or priority. Appendix D lists the 13 priority common information needs identified, and progress to date on addressing each.

¹³ See footnote number five.

At this time, six years since common information needs were first identified and prioritized, the challenge for MetroGIS is to ensure that common information needs continue to be accurately identified and appropriately met.

The following strategies have been developed to address this challenge:

- 1) Determine if the two priority common information needs for which work on regional data solutions have not been initiated should continue to be priorities (Land Regulations and Rights to Property).
- 2) Determine if additional common information needs should be classified as priorities for MetroGIS to address (e.g. vulnerable infrastructure).

3.1.2 Regionally Endorsed Data Solutions

Challenge: To continue to develop, maintain, and promote regionally endorsed data that meet the priority common information needs of stakeholders.

In order to respond to common information needs, MetroGIS works with data producers to achieve regional data solutions for each identified common information need. For example, information about addresses was determined to be commonly needed by most stakeholders to carry out normal business functions, and MetroGIS facilitated the compilation of 2 regional datasets: regional parcel and regional street centerline datasets to address this common information need.

The method for addressing common information needs is to develop or assemble geodata that addresses the information need in a normalized fashion across the seven-county region. MetroGIS's role is to work with data producers to ensure availability of data and metadata for posting on DataFinder, and to support the efficient delivery of data to interested users. This work includes identifying and encouraging organizations that have a business need to compile (assemble) primary geodata into a regional dataset.

The following strategies have been developed to address this challenge:

- 1) Complete efforts in progress to develop regional solutions to address common information needs (see Appendix D for common information needs).
- 2) Periodically assess the need for modifications to, or expansions of, endorsed regional datasets.
- 3) Promote best practices for developing and delivering accurate, current, and well-documented data.
- 4) Encourage and support regional and local custodians in fulfilling custodian responsibilities (e.g. offer forums, monitor updates).

- 5) Promote the awareness of data availability and understanding characteristics of the data by the stakeholder community.
- 6) Consider requests for regional endorsement of datasets developed by others that are related to common information needs and establish procedures and criteria to guarantee quality and relevance of endorsed datasets.

3.1.3 Common Tools for Data Discovery and Distribution

Challenge: To engage data producers in determining efficient and effective ways to fully utilize existing data discovery and distribution tools developed through MetroGIS (i.e. DataFinder).

MetroGIS has developed DataFinder, a suite of tools for data discovery, browsing and downloading, and Internet-based access to geodata. More recently, DataFinder Café has added the capability of subsetting datasets, making the downloading of geodata more accessible and useful. These tools have been developed primarily to make data discovery and access easier for data users.

MetroGIS is exploring ways to address concerns of data producers, and to focus resources in areas where producers see needs. County data producers have raised the question of whether data distribution capabilities could be used for distribution of data they produce regardless of whether the data are components of regional datasets. In addition, some data producers are interested in working towards the development of a common Internet-based mechanism for distributing data for which they charge a fee, rather than each data producer developing this capability individually (Appendix F summarizes findings from interviews with county data producers).

Possible benefits of using a common mechanism for data discovery and distribution include:

- Potential for increased staff efficiencies for data producers due to reduced time needed to service requests for data
- Savings in capital costs for computer equipment (e.g. servers, storage) and in computer maintenance costs
- Potential for increased revenue for data producers from increased sales of data (where charges are applied)
- General benefits to the user community resulting from easy access to data, including possible ripple-down economic benefits to the region.

Examples of datasets that data producers may wish to distribute via DataFinder Café include planimetric data, elevation or contour data, and data in the areas of planning, public works, recreation and taxation.

At this time, DataFinder Café is available for distribution of regional, county and other datasets for which there is no fee. For datasets for which there is a fee, a mechanism for charging for downloading of partial or whole datasets will be needed. One mechanism would be the development of an “eCommerce function” that would allow fees to be charged through the Internet as a part of the DataFinder Café application. Building an eCommerce function is estimated to cost from \$40,000 to \$60,000.

The following strategies have been developed to address this challenge:

- 1) Conduct outreach to ensure that data producers are aware of opportunities to distribute their data through DataFinder Café.
- 2) Regularly evaluate whether or not DataFinder and DataFinder Café continue to meet users needs and what enhancements may be needed.
- 3) If interest is sufficient, explore the development of an eCommerce function, including facilitating the scoping of work and exploring methods for sharing the cost of developing an eCommerce function.
- 4) If needed, establish agreements for cost sharing and for developing an eCommerce function.

3.1.4 Organizational constraints to Data Distribution

Challenge: To continue to address data producer issues and user preferences so that barriers and impediments to effective distribution of data are minimized.

MetroGIS provides support to assist data producers in implementing efficient methods for distributing data to other users, and assists users in accessing data of interest. Key barriers for producers include:

- Staff time constraints which limit time available for developing regional data solutions
- Policy barriers that arise from data privacy concerns, cost recovery policies, and licensing issues
- Internal organizational structures that are typically de-centralized with regard to GIS functions. Individuals representing data producer organizations on regional initiatives can include a variety of viewpoints, and include policy makers, managers, GIS technical staff, planners, IS staff, and others.
- Limited and diminishing budgets in a time of shrinking government spending.

Barriers for users include difficulties in accessing data, and having to use multiple license procedures. Users prefer "one-stop shopping" with coordinated and consistent practices and policies.

The following strategy has been developed to address this challenge:

MetroGIS should provide a forum for producers to work jointly to identify barriers and develop solutions that will serve the purpose of making quality geodata readily available to interested users, including data sharing agreements.

3.1.5 Support for the MetroGIS Mission

Challenge: To maintain a high level of involvement in regional data sharing activities that accomplish the MetroGIS mission.

The MetroGIS mission was adopted in February 1996 by the MetroGIS Coordinating Committee and officially endorsed by the Policy Board as part of the 2000 Business Plan. This mission focuses on data sharing, the method for achieving maximum efficiency in data sharing (through a *stakeholder-governed, metro-wide mechanism*), and ensuring the quality of data (*data that are accurate, current, secure, of common benefit and readily usable*). MetroGIS has provided the forum through the MetroGIS Policy Board and various staff committees to carry out this mission and thereby provide benefits to stakeholders. In order to maintain the benefits derived to date, it is imperative that stakeholders continue to be actively involved in MetroGIS.

The following strategies have been developed to address this challenge (see specific tactics in Appendix G):

- 1) Strengthen policy-level support for mission.
- 2) Demonstrate producer and user benefits through a variety of actions, including implementation of the Performance Measurement Plan.
- 3) Maintain an effective organizational structure to achieve the mission, including the evaluation of appropriate membership of the Policy Board and Committees so that all relevant and affected parties are represented.
- 4) Strengthen local involvement through user groups or other methods, based on what works best for each community.
- 5) Investigate communication options that respect MetroGIS stakeholders' time constraints.
- 6) Develop advocates for MetroGIS - both technical and policy level staff, focusing on individuals and organizations that understand and support the MetroGIS mission.

3.1.6 Outreach and Broader Coordination

Challenge: To work effectively with organizations within and outside the seven-county region, including surrounding counties, and state and national organizations, to develop and promote common policy and technical issues of mutual benefit.

MetroGIS needs to continue to reach out to existing and new stakeholders within the region in order to maximize the sharing of data. In addition, it is important to coordinate activities with organizations outside the metro area to find ways to increase uniformity and thereby improve data quality and data access. In particular, it is important to leverage MetroGIS investment in data discovery and distribution tools by coordinating with the State geodata infrastructure.

The following strategies have been developed to address this challenge:

- 1) Leverage MetroGIS investment in DataFinder Café by working with appropriate State interests to ensure coordination with the State’s geodata infrastructure. For example, work with the state Land Management Information Center (LMIC) to integrate DataFinder Café into Minnesota GeoIntegrator.
- 2) Maintain currency of MetroGIS website (www.metrogis.org) with information that accurately documents MetroGIS’s mission, activities, accomplishments, participants, processes and opportunities for participation.
- 3) Increase public awareness through interviews, speaking engagements, responding to requests for information, stories in publications, and newsletters, surveys, and events.
- 4) Develop a means of responding to requests for spatial expansion of regional data solutions, including establishing criteria for agreeing to a spatial expansion request.

3.2 Challenges Related to Emerging Issues

Two challenges were identified that required policy direction to determine whether they are within MetroGIS’s scope, given its mission statement and historical role. The first, “distribution of parcel data to non-profits and private sector”, is a reemerging issue, given that this issue was addressed as part of the April 2000 Business Plan (see Appendix B). The second challenge takes MetroGIS beyond its historical role of focusing primarily on development of datasets to address common information needs, and into a discussion of its role in facilitating the development of common geodata applications.

3.2.1 Distribution of Parcel Data to Non-Profits and Private Sector

Challenge: To determine effective solutions to meet non-profit and private sector needs for parcel data in a way that benefits both data producers and users.

This issue was initially addressed in the April 2000 Business Plan, and a series of actions were subsequently taken to allow for the distribution of a regional parcel dataset for a fee to interested users (Appendix H). In interviews with potential data

purchasers, MetroGIS learned that, for several reasons, potential purchasers determined that the value of the regional parcel dataset was not considered in sync with its price (Appendix I).

During spring 2002, MetroGIS completed implementation of a new Internet-based data distribution capability that allows for subsetting of datasets. This capability may address some of the key reasons that potential purchasers articulated for not accessing parcel datasets, particularly the ability to purchase subsets of the regional parcel dataset. The ability to access and purchase subsets would make downloading of data easier, and the charge for data lower (assuming that fees are based on a per-parcel basis, or some other volume-based method).

MetroGIS is currently distributing parcel data produced by counties to public sector and academic interests through DataFinder Café. Producer counties have agreed to distribute parcel data to these entities at no charge via agreements that were executed in March 2002. However, most producers continue to seek cost recovery for distribution of parcel data to private sector and non-profit entities.

In June 2002, the Coordinating Committee asked the Policy Board to reconsider the issue of distribution of parcel data through DataFinder to private and non-profit entities. Specifically, the Board was asked, 1) Should a collaborative solution for distribution of parcel data to non-government interests be pursued, and 2) Should an eCommerce solution be developed to allow for charging non-public entities? While there is general agreement that government data producers are not obligated to find ways to make parcel data easily accessible and attractively priced, there is also an interest among most producers in achieving benefits that might accrue from the sale of parcel data to the private sector.

The issue of collaboration on distribution relates not only to distribution to private sector interests, but also to non-profit organizations. The region does not currently have a policy for when and how to distribute parcel data through DataFinder to non-profits, including whether there are circumstances where fees might not be assessed.

The following strategies have been developed to address this challenge:

- 1) Provide a forum for producers to work jointly to determine whether parcel data and attribute data should be distributed through MetroGIS to interested non-public entities, and if so, to establish procedures and practices to distribute parcel data and attributes to interested users. This work should include:
 - a) Review of current demand for parcel datasets that are distributed for a fee.

- b) Outline roles and responsibilities for assembly, documentation, and distribution of regional parcel data as was accomplished with the agreement that expired in May 2002.
 - c) Define the regional parcel data product as the same regional parcel dataset distributed to government and academic interests.
 - d) Rely upon a single license and a single set of procedures.
 - e) Consider the development of an "eCommerce" application to allow for charges to be assessed to non-public entities who wish to purchase data.
 - f) Establish a funding strategy for development and operation of access tools that may be needed.
- 2) Develop policies and procedures regarding distribution of parcel data to non-profit organizations. Consider determining whether and how to distribute parcel data on a case-by-case basis, as requests for data are made.

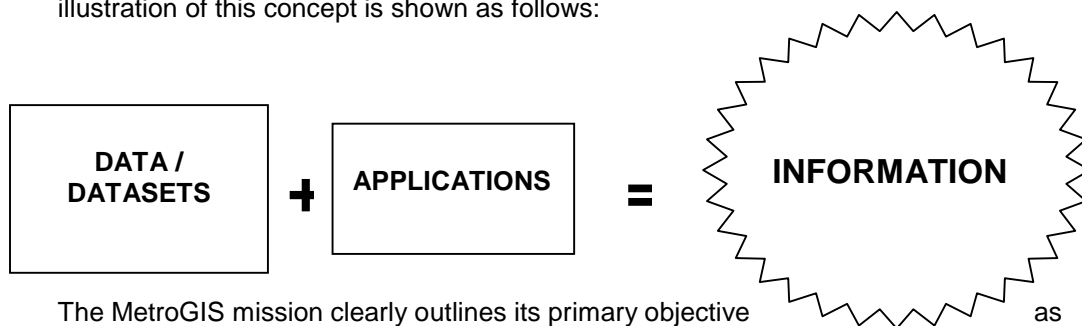
On July 30, 2002, the Policy Board directed the formation of a county producer workgroup supported by MetroGIS staff to address this challenge area. This group was formed and began deliberations in August 2002.

3.2.2 Common Geodata Application Needs

Challenge: To determine whether MetroGIS should expand its role to include fostering the sharing and/or development of geodata applications that respond to common user needs and that reduce support costs for data producers.

"Application" is a term used to describe a mechanism for creating information from data. By one definition, an application is a "program designed to perform a specific function directly for the user." Applications are also referred to as "software". Examples include word processing software, database programs, and mapping tools.

To make data more useful, "applications" must be applied to data. A simple illustration of this concept is shown as follows:



The MetroGIS mission clearly outlines its primary objective as being to provide a mechanism for sharing of geographically referenced data. From its inception, the focus of MetroGIS has been on data sharing, rather than applications. Work on geodata applications for data analysis has been considered low priority (however, applications for *data discovery and distribution* have been developed - DataFinder and DataFinder Café.) Technology and user expectations

have changed over time with increased interest in more direct access to user-friendly information. This change has elevated applications to a higher priority level for the region.

As the quality of geodata improves and becomes more accessible, more people are finding ways to use this data to improve decision-making. Governmental units, businesses, non-profits, and private citizens can all benefit by having access through application software to the information that can be derived from geospatial datasets. For example, real estate query applications allow users to identify a property and to view a variety of characteristics about the property (attributes) online. Another example is application software that allows the user to create mailing lists from geodata.

The issue of applications is also being raised at the national level, as high quality data becomes more available and users see new opportunities for creating better information to support decision-making.¹⁴

In July 2002, the MetroGIS Coordinating Committee and staff requested direction from the Policy Board regarding whether MetroGIS should expand its role to include fostering the sharing and/or development of geodata applications that respond to common user needs and that reduce support costs for data producers. A concern of staff, with which the Policy Board concurred at its July 2002 meeting, is that the world of applications could be boundless, and therefore, MetroGIS should move slowly using a gradual and incremental approach.

The following strategy has been developed to address this challenge:

Provide a forum for producers to assist in clarifying and defining the scope of work appropriate for MetroGIS concerning facilitation of regional solutions to commonly needed geodata applications. This work should include:

- a) Expansion and analysis of the preliminary inventory of applications (Apdx J)
- b) Assessment of common application needs for local and regional governmental stakeholders
- c) Identification of existing applications that can be shared among stakeholders
- d) Facilitation of the sharing of applications of interest among stakeholders
- e) Identification of opportunities for public / private partnerships in addressing application needs not currently met
- f) Exploration of implications of the Data Practices Act on data distribution options
- g) Collaboration with others at the state and national level as policies regarding applications are developed

¹⁴ Per discussion between John Moeller, former Director of the Federal Geographic Data Committee (FGDC), and Randall Johnson, MetroGIS Staff Coordinator.

4.0 OPERATIONAL IMPLICATIONS FOR 2003 – 2005

This section of the 2003 - 2005 Business Plan considers operational implications associated with implementing strategies to meet challenges identified in Section 3.0. General assumptions, and projected level of effort and funding options are outlined.

4.1 Background and General Assumptions

The April 2000 Business Plan included several assumptions that underlie MetroGIS operations and funding, most of which continue to be valid in 2002. These assumptions, with assumptions identified in the 2002 planning process, include:

- **Need for Continuing Collaboration**
While significant progress has been made in addressing priority information needs (Appendix D) and DataFinder is now operational, MetroGIS's role in supporting continued regional collaboration remains vital. MetroGIS should continue to work on challenges identified through the 2003 - 2005 Business Planning process that clearly establish the need for and benefits of continued collaboration.
- **Metropolitan Council Role in MetroGIS**
The 2003 - 2005 Business Plan assumes that the Metropolitan Council will continue to be a primary sponsor, and will provide funding and staff support for core MetroGIS activities. This includes continuing to pay a maintenance fee to secure access and quarterly updates for the MetroGIS community to The Lawrence Group Street Centerline dataset and provide hardware, software, and application maintenance support for the DataFinder and MetroGIS information sharing websites.

It must be noted that the Metropolitan Council's support must be renewed each year during the Council's annual budget process. Changes in Council direction could occur in the future as a result of changes in the composition of the Council (council members are appointed by the Governor), as well as funding restrictions imposed due to reduced State revenues.

- **Future Project Funding**
Metropolitan Council management has indicated that they envision a partnership model for funding of special GIS projects in the future, and a gradual diminution of the Council role in funding such projects. For example, enhancements to DataFinder that are beneficial to producers and/or users may be funded through sources outside the Council. Given this, it is assumed that Metropolitan Council funding will remain generally static over the planning period of 2003 to 2005.
- **Completing Data Solutions for Common Information Needs**
MetroGIS will continue to rely upon stakeholders for development of data and therefore the pace of data development will be set largely by stakeholders, based on availability of resources or lack thereof. MetroGIS will continue to facilitate agreement on regional data specifications and identification of data custodians.
- **MetroGIS Organizational Structure**
It is assumed that the current organizational structure for MetroGIS is effective with regard to accomplishing the MetroGIS mission, and therefore, no significant changes are required.

4.2 Projected Expenditure Levels Associated with Recommended Strategies

Given the assumptions outlined in Section 4.1, and the assumption that the 2003 MetroGIS budget as approved by the MetroGIS Policy Board will be approved by the Metropolitan Council, the following expenditure levels are projected for the planning period from 2003 to 2005 (detail for each major category is provided following Table 2):

Table 2: Projected MetroGIS Expenditures - 2003 to 2005

Breakdown by Expense Type	2003 Requested	2004 Projected	2005 Projected
Salaries & Fringes (3.25 FTEs)	\$213,000	\$220,000	\$226,000
Operating Expense and Contract Services	\$107,250	\$36,000	\$43,000
Data Maintenance	\$75,000	\$75,000	\$75,000
Subtotal	\$395,250	\$331,000	\$344,000
Projects Funded through Grants	15,000	Unknown	Unknown
Projects funded through Partnerships (DataFinder Enhancements)	25,000	Unknown	Unknown
Budget offset - Donations from Data Sales	3,788	Unknown	Unknown
TOTAL	\$439,038	\$331,000	\$344,000

Salaries and Fringe Benefits

This expense category includes salaries and fringe benefits for 3.25 FTEs, as shown in Table 1. Increases over the planning period reflect a 3% cost of living adjustment per year.

Operating Expenses and Contract Services

The expense category includes operating expenses, and contract services. Contract services include:

- Technical and administrative services to support the distribution of regional datasets and DataFinder
- Professional and administrative support for key coordination and policy functions, including promotion and endorsement of voluntary policies, development of marketing strategies, and special initiatives
- Production of the MetroGIS outreach pieces and the annual report
- Strategic and business planning, and performance measurement

A change for the 2003 - 2005 period is proposed regarding funding of Users Groups. Although funding has been budgeted in the past, less than \$500 has been requested over the last two years. While MetroGIS continues to encourage local units of government to participate in User Groups in order to sustain and improve knowledge sharing, supplemental funding for User Groups will no longer be available directly from the MetroGIS budget to GIS Users Groups.

Projected expenditures for 2003 reflect continued work on implementing strategies outlined in this business plan. For 2004, level of effort is expected to decline as a result of the completion of much of the business planning work, and grow somewhat in 2005 in order to accommodate the next update of the business plan.

It should be noted that the lower level of effort in the area of contract may limit the pace of implementation of strategies outlined in the 2003 - 2005 Business Plan. If more significant progress is desired, partnerships and other funding options may be explored.

Data Maintenance

Continuation of data maintenance payments to counties, at the same funding level as in past years, is proposed as part of 2003-2005 Business Plan. This Plan also recommends an increased emphasis on using funds for projects that support the MetroGIS mission with greater accountability for use of funds and the option to "pool" funds for projects that could provide a positive impact to MetroGIS stakeholders.

In the past, there have been misunderstandings regarding the purpose of data maintenance payments and whether they are needed to ensure continued participation in MetroGIS from data producers. Benefits to data producers and users are now more visible, and therefore enticements to ensure collaboration such as the data maintenance payments are no longer thought to be needed. DataFinder is in place, uniform data standards and practices have been instituted, and a forum for finding opportunities and solutions of mutual benefit for data producers is underway. Data maintenance payments can now be clearly focused on providing opportunities to data producers that will enable them to generate benefits for themselves and for the broader MetroGIS community.

Projects funded through Grants and Partnerships

MetroGIS will continue to seek grants for special projects such as the NSDI Web Integration with Clearinghouse Grant that was awarded in September 2001 and reflected in the 2003 budget estimate. Starting in 2003, MetroGIS will seek to implement projects of benefit to data producers and users that will be funded through partnerships that feature cost sharing. Cost sharing of projects can result in the initiation of projects that individual producers or users might not be able to undertake, and in faster implementation of geodata initiatives.

**APPENDIX A:
METROGIS FUNCTIONS**
(Excerpt from April 2000 Business Plan)

Function Categories

Function Category	Importance / Investment Ranking	Decision Rules
Mission Critical (core)	High/High	MetroGIS's mission cannot be achieved without supporting these functions, strong support for investment and high importance to stakeholder operations. These functions drive the MetroGIS program.
Funded Support	Med/High	Important but not critical functions to achieving the MetroGIS mission. MetroGIS should take responsibility to invest resources and make sure these functions are supported.
Partnered Support	High/Med	High importance to achieving the MetroGIS mission but require partnering to achieve. MetroGIS should take the lead in facilitating the required partnerships but not necessarily fund the projects.
Selectively Desirable	Med/Med	Decisions on a case-by-case basis as to timing and level of support for these middle priority but important functions. Interdependencies, which support and/or are necessary to achieve Mission Critical functions, a key to pursuing. These functions should be targeted in the marketing plan to improve support and to better understand concerns.
Low Priority	Low/Low	Postpone funding consideration until all other functions are achieved, possibly reconsider appropriateness for MetroGIS to support.

Using these rules, the 18 functions identified during the 2000 Business Planning process were prioritized as follows:

Mission Critical: MetroGIS's mission cannot be achieved without supporting these functions.

- Promote and endorse voluntary policies, which foster coordination of GIS among the region's organizations.
- Facilitate data sharing agreements and licensing among MetroGIS stakeholders.
- Provide a directory of regional data within region and a mechanism for search and retrieval of GIS data (i.e. maintain and enhance DataFinder). The goal is to provide a single point with information on how to search for sources of data.
- Identify unmet GIS needs with regional significance and act on these needs.
- Develop and endorse standards for GIS data content, data documentation, and data management for regional datasets.

Funded Support: Important but not critical. MetroGIS should take responsibility to invest resources and make sure these functions are supported.

- Maintain MetroGIS website (<http://www.metrogis.org>).
- Promote collaborative funding of pilot projects that meet regional needs.
- Promote filling gaps in metadata based on identified regionally significant data priorities.
- Maintain liaison relationships with committees/ organizations with similar objectives to MetroGIS (i.e., Governor's Council on Geographic Information, NACO, GIS/LIS, NSDI/FGDC).
- Promote forums for MetroGIS stakeholders to discuss common GIS needs and opportunities.
- Advocate for MetroGIS needs and desires with state and federal policy makers

Partnered Support: High importance to achieving the MetroGIS mission but require partnering to achieve.

- Create and maintain datasets for MetroGIS based on identified priorities (i.e., to address the

- 13 priority information needs endorsed by the Policy Board as having regional significance).
- Help promote development and exchange of GIS applications and procedures that serve GIS needs.

Selectively Desirable: Decisions on a case-by-case basis.

- Develop master contracts for regional GIS projects, when appropriate.
- Endorse standards for telecommunication protocol and networks. (AKA: Create guidelines for getting electronic access to the information that is being shared)
- Provide technical assistance to participants to retrieve, translate, and use data developed and maintained on behalf of MetroGIS.
- Conduct research to meet common regional GIS needs (i.e., data policy, distribution, etc).
- Publish MetroGIS newsletter.

Low Priority: Postpone funding.

- Identify GIS training and continuing education needs and encourage participation.
- Market MetroGIS data and products
- Provide a repository of GIS human resources information (centralized job posting/position descriptions).

Note: The business plan budget projections for 2000-2003 and again for 2003-2005 assume that only functions ranked as at least medium/medium will be funded by MetroGIS. Functions that fall into the low priority category, and certain medium/medium priorities that do not relate to a higher priority function, such as, development of master contracts and conducting research to meet common regional needs, are not proposed to be funded by MetroGIS.

APPENDIX B:
RESULTS OF RECOMMENDATIONS FROM PREVIOUS BUSINESS PLAN

The following table summarizes results achieved in relation to the recommendations laid out in the 2000 MetroGIS Business Plan. The items listed under "2000 Business Plan Recommendations" are taken from the Executive Summary of the Plan, with modifications pursuant to Policy Board action taken on April 19, 2000.

2000 Business Plan Recommendations	Status
<p>1. REGIONAL DATASETS AND DISTRIBUTION MECHANISM</p> <ul style="list-style-type: none"> - All member organizations continue to pursue the previously endorsed work plans for enhancement of MetroGIS' DataFinder tool and conceptual design for remaining priority information needs. - MetroGIS functions expand to include support of a centralized Internet-based distribution of regional and county geospatial data. - The counties, and others as appropriate, authorize designated regional custodian organizations to distribute to government organizations all regional data solutions that are aggregates of designated primary data sources. 	<p>Partial ✓ Through June 2002, six (6) priority information needs have been addressed, five (5) are in progress, and two (2) have not been addressed to date. Progress since 2000 on priority information needs has focused on completion of the following regional datasets: parcels, planned land use, and census geography data.</p> <ul style="list-style-type: none"> ✓ In 2001, DataFinder was enhanced and registered as a node of the National Spatial Data Infrastructure (NSDI). ✓ This recommendation was intended to address distribution of parcel data produced by counties. As a result of the regional parcel data pilot project in 2000/2001, a solution was developed for assembly and distribution of a regional parcel dataset through a distribution mechanism now called "DataFinder Café". The beta test of the new distribution system was recently completed, and the system will be fully operational in June 2002. Local, regional, and state government representatives, as well as academic and non-profit organizations submitted comments. ✓ Addressed above.
<p>1. SUSTAINING METROGIS ORGANIZATION</p> <ul style="list-style-type: none"> - The Council continues to fund the coordination functions for MetroGIS (through 2003). 	<ul style="list-style-type: none"> ✓ In June 2000, an agreement-in-principle was reached with the Council to fund MetroGIS coordinating activities through 2003.

- MetroGIS postpones further consideration of a subscription fee program for the public sector
- The Council continues to seek out partnerships, as opportunities present themselves, to finance MetroGIS's coordination expenses.

- The MetroGIS Policy Board continues to be stakeholder governed, and has been since its inception. Member organizations commit to continued active participation of their elected officials and senior management on the Policy Board, Coordinating Committee, and Advisory Teams.

- Appropriate representatives of member organizations continue to actively participate in the affairs of MetroGIS, including promotion and active participation of GIS users groups within each county.

- Register the "MetroGIS" name with state and federal authorities.

✓ Common information needs not yet fully met, and therefore subscription fee has not been re-visited.

✓ MetroGIS received a grant from NSDI for web-mapping service enhancements to DataFinder (\$19,000).

While the Council continues to seek out partnerships where appropriate, partnerships have focused on data development and data maintenance rather than financial partnerships. Examples of partnerships include:

- 2nd generation data sharing agreements with the seven counties
- renewal of maintenance agreement with TLG
- user feedback on data anomalies encountered

In addition, MetroGIS is seeking collaborative opportunities as follows:

- engaging the Metro E911 Board in the activities of MetroGIS
- improving US Census Bureau data and products to be consistent with locally-produced data, in particular, the TLG dataset.

✓ In response to stakeholder input and suggestions, the MetroGIS committee structure was reorganized in July 2001. This reorganization was designed to more efficiently use staff time from stakeholder organizations. Member organizations continue to demonstrate their commitment as evidenced by participation in MetroGIS activities. The MetroGIS organizational structure continues to be discussed and has been identified as a challenge area for the 2002 Business Plan.

Outstanding Issue: A primary objective of MetroGIS is to foster communication around GIS issues at the technical level. One way to achieve this is through support of user groups. As of 2002, user groups are active in most counties. An outstanding challenge remains to encourage active users groups in each county, or a method for encouraging networking on common GIS needs and opportunities. Funding for users groups has seldom been accessed.

Partial ✓ : Registration completed with the State of Minnesota for the MetroGIS and MetroGIS DataFinder logos. In process with the federal government.

<p>2. METROGIS RELATIONSHIP WITH DATA PRODUCERS (COUNTIES)</p> <ul style="list-style-type: none"> - Initiate discussions between the Metropolitan Council and the counties concerning continuation of the practice of funding a supplemental data maintenance payment to the counties. - The counties enter into a common data sharing agreement and related licensing with the Council and others, as deemed appropriate, effective through 2003, which continue the data sharing terms of the current agreements but without payment of additional project funds. - Local government, as well as all other stakeholders, actively participate in data production, in reviewing MetroGIS products to assure accuracy for users and in attending MetroGIS committees as the opportunity arises. 	<ul style="list-style-type: none"> ✓ The Metropolitan Council and the Counties discussed this issue as a part of negotiation of 2nd generation GIS data sharing agreements. The Council agreed to fund counties through 2003 at the same level as in the original agreement. Negotiations for the 3rd generation data sharing agreements (2004 and beyond) will address the best way to continue to improve data quality and accessibility. ✓ Addressed through 2nd generation GIS data sharing agreements (see above). <p>Counties have agreed to share parcel data and review accuracy of census data; Washington County is piloting regional data specifications and maintenance policies for watershed boundary data; Cities are involved in reviewing the quality of planned land use data.</p>
<p>7. PRIVATE SECTOR DISTRIBUTION</p> <ul style="list-style-type: none"> - Form a subcommittee made up of private industry, counties, and the Metropolitan Council to work directly with the MetroGIS Coordinating Committee and Policy Board to determine costs and legal structure that will meet the needs of the private sector. <ul style="list-style-type: none"> a. The Chair and Vice-Chair of the Policy Board will oversee the development of the subcommittee b. The subcommittee will be co-chaired by one member of the Policy Board and a member from the private sector, the latter as determined by the subcommittee. c. The subcommittee will submit a report on recommendation at the next MetroGIS Policy Board meeting for its consideration. 	<ul style="list-style-type: none"> ✓ A subcommittee of the Policy Board was formed in mid-2000, led by the Vice Chair of the Board, resulting in Board action in October to encourage counties to enter into an agreement to distribute a regional parcel dataset. <p>Outstanding Issue: A multi-jurisdictional agreement was executed with county data producers in May 2001 to distribute parcel data to non-government interests, and distribution capabilities began in June 2001. No datasets were distributed through this agreement and in May 2002, this agreement was terminated without any interest shown from non-government entities. Initial discussions with private sector entities indicated that price and lack of attribute data were major reasons that interest has not been shown.</p>

12. OUTREACH

MetroGIS utilizes all available outreach opportunities to educate potential GIS users about MetroGIS.

✓ An outreach strategy was adopted by the Policy board in April 2001.

Specific activities undertaken include:

- Submission of MetroGIS article for each issue of the MN GIS/LIS Newsletter,
- Publication of annual report,
- Presentations at conferences,
- Participation in the Governor's Council on Geographic Information,
- Attendance at county user group meetings,
- Inclusion of information sharing items on each MetroGIS committee agenda,
- Redesign MetroGIS website to include more information and a search tool.

In addition, contacts were made with three of the "collar counties" to discuss common geodata interests.

Lessons from Practice: A Guide to Organizing and Sustaining Geodata Collaboratives was published and widely circulated.

MetroGIS was awarded the grand prize in ESRI's Geography Network Challenge in July 2001.

APPENDIX C:
HIGH LEVEL OUTREACH STRATEGY FOR METROGIS
(http://www.metrogis.org/about/business_planning/outreach.pdf)

Improving Understanding and Satisfaction

Current Practices or Funded and Under Development:

1. Expand upon the Annual Report format that has been used the past three years and mailed to the same audience as in the past (4-page brochure documenting accomplishments over the past year in a newsletter format, mailed to 1400 individuals – over half of them are chief elected and chief administrative officials with local government serving the metro area.)
2. Administer Participant Satisfaction Survey and use as an opportunity to communicate past accomplishments as well as to receive feedback. (*Note: during preparation for Performance Measures Project, it was decided to synchronize this survey with the measurement and reporting plan. The frequency thereafter will be set forth in the Performance Measures Plan*)
3. Continue to improve the content and intuitive character of the MetroGIS Internet site.
4. Continue to submit articles for the quarterly MN GIS/LIS newsletter.
5. Continue to regularly attend county-based GIS user group meeting in all seven counties to observe and document interests that are common among the groups.
6. Continue to host workshops and educational sessions at the annual MN GIS/LIS conference.
7. Continue to accept requests to speak about MetroGIS to stakeholder communities and continue the philosophy of encouraging Policy Board, Coordinating Committee and Team leadership to take the lead, supported by staff.
8. Continue to keep the leadership of Governor's Council on Geographic Information (GCGI) and MN Land Management Information Center (LMIC) informed of MetroGIS' activities and continue to participate in activities of the GCGI and LMIC as invited.

Suggested new practices:

- a) Initiate regular communication with the collar counties, if possible, through an umbrella organization.
- b) Place more responsibility on Board, Coordinating Committee, and Advisory Team members to proactively identify stakeholder workshop and conference opportunities, which would be appropriate/beneficial for MetroGIS to participate.
- c) Establish a partnership with the GCGI to collaborate on outreach activities of common interest, in particular, to improve understanding among individuals affiliated with government in the collar counties and Greater Minnesota of MetroGIS' data sharing philosophy, practices, and lessons learned.
- d) Place more responsibility on Board and Coordinating Committee members to engage in one-on-one dialogue to advocate for MetroGIS principles with essential officials affiliated with each of MetroGIS' strategic partners.
- e) Seek out opportunities to promote MetroGIS' philosophy, practices and projects via the news media and hands-on workshops.

¹ On October 14, 2002, the following updates were made by the Staff Coordinator: 1) #1 updated to delete reference to a promotional brochure. 2) Workshop called for in old #2 completed and removed. 3) # 3 updated to remove reference 2002 as a target date for the survey and to permit the Performance Measures Plan to dedicate timing and 4) Old #4 completed as part of Business Plan Update and removed from listing.

**APPENDIX D: PRIORITY COMMON INFORMATION
NEEDS AND RELATED REGIONAL DATASETS**

as Defined by Stakeholders (Total = 13)
(for more information, see <http://www.metrogis.org/data/statements.shtml>)

COMPLETED*	IN PROGRESS	NOT STARTED
Street addresses	Jurisdictional Boundaries	Rights to Property
Where People Live	Lakes and Wetlands	Land Regulations
Land Use Plans	Socioeconomic Characteristics of Areas	
Parcel Boundaries	Existing Land Use	
Unique Parcel Identifiers	Highway/Road Networks	
Census Boundaries		
6	5	2

*Regional solutions have been adopted by the Policy Board and associated datasets developed (as of June 2002).

COMPLETED and AVAILABLE THROUGH DATAFINDER*	DATASET(S) AND CUSTODIAN (Primary / Regional)
Street addresses	<ul style="list-style-type: none"> • Parcels (Counties / Metropolitan Council) • Addressable Street Centerlines (TLG / Metropolitan Council)
Where People Live	<ul style="list-style-type: none"> • Parcels (Counties / Metropolitan Council) • Addressable Street Centerlines (TLG / Metropolitan Council)
Land Use Plans	<ul style="list-style-type: none"> • Planned Land Use (N/A / Metropolitan Council)
Parcel Boundaries	<ul style="list-style-type: none"> • Parcels (Counties / Metropolitan Council)
Unique Parcel Identifiers	<ul style="list-style-type: none"> • Parcels (Counties / Metropolitan Council)
Census Boundaries	<ul style="list-style-type: none"> • 1990 Census Geography (N/A / Metropolitan Council) • 2000 Census Geography (N/A / Metropolitan Council)

IN PROGRESS*	DATASET(S) AND CUSTODIAN
Jurisdictional Boundaries	<ul style="list-style-type: none"> • MCD/County Boundaries (Counties / Metropolitan Council) • School District Boundaries (TBD) • Watershed District Boundaries (TBD)
Other Priorities (2 nd Generation)	TBD

APPENDIX E: MAJOR TASKS AND REPORTING RESPONSIBILITIES FOR METROGIS STAFF

MetroGIS Staff Coordinator

1.00 FTE

A. Work Direction and Priorities

The MetroGIS Staff Coordinator works under the direction of the MetroGIS Policy Board in carrying out the MetroGIS agenda. The Coordinator also works closely with the MetroGIS Coordinating Committee.

B. Reporting Responsibilities

The MetroGIS Policy Coordinator is accountable to the MetroGIS Policy Board, but reports to management within the Council. The Coordinator works closely with the GIS Manager, and other Metropolitan Council staff.

C. Major Tasks

1. Manages and lead support for MetroGIS's Strategic Planning, Policy, and Organizational Development and Operation.
2. Manages and lead support for MetroGIS's GIS Data Sharing Agreement and Licensing Initiatives.
3. Manages MetroGIS's Outreach and Communication Activities.
4. Represents MetroGIS in efforts with similar objectives (e.g. National Spatial Data Infrastructure (NSDI), MN Governor's Council on Geographic Information), at hearings concerning, metro, state, and federal policy development, and other activities as the opportunity arises.
5. Serves as project manager for strategic projects.
6. Provides work direction to Council GIS Unit staff who assist with staffing MetroGIS, including the MetroGIS DataFinder manager, the MetroGIS Administrative Technician, GIS Data Management Coordinator concerning MetroGIS responsibilities, and other Council GIS Unit staff assigned to MetroGIS on a project-by-project basis.
7. Collaborates with Council management to secure funding and agreements necessary to MetroGIS' success.
8. Monitors GIS activities of stakeholders and maintains active liaison relationships with strategic partners, members of the MetroGIS Policy Board, and members of the Coordinating Committee.

MetroGIS Administrative Technician

1.00 FTE

A. Work Direction and Priorities

The MetroGIS Administrative Technician receives work direction from the MetroGIS Policy Coordinator.

B. Reporting Responsibilities

This position is accountable to the MetroGIS Policy Coordinator who coordinates with the Metropolitan Council GIS Manager concerning occasional non-MetroGIS support tasks.

C. Major Tasks

1. Oversee the timely reproduction and distribution of agenda materials and correspondence.
2. Schedule meetings with and events and interact with managers and elected officials on a regular basis.
3. Coordinates with Finance to ensure timely payment of bills and receipt of funds.
4. Responsible for ensuring the MetroGIS Internet site (www.metrogis.org) is current (does not draft text but is responsible for posting updated materials and maintaining the calendars, etc.)
5. Assists MetroGIS DataFinder Manager in maintaining currency of DataFinder website.
6. Maintains MetroGIS contact database.
7. Coordinates, under the supervision of the Staff Coordinator, the data licensing procedures, including assigning passwords and updating security information for MetroGIS DataFinder.
8. Manage record keeping and indexes of past MetroGIS Policy Board and Committee actions.
9. Maintain files (electronic and paper).

MetroGIS DataFinder, Regional Database Administration, and Technical Support

1.25 FTE

It is assumed that the Council's GIS Unit staff will be developing applications and procedures, in addition to those outlined below and expressly for the Council's business that will benefit MetroGIS.

A. Work Direction and Priorities

The MetroGIS Staff Coordinator, DataFinder Manager and Regional Database Coordinator, in consultation with the MetroGIS Technical Advisory Team, MetroGIS Coordinating Committee and the Council's GIS Manager, shall establish a work program for MetroGIS's DataFinder, Regional Database Administration, and Technical Support functions consistent with the goals and objectives of MetroGIS.

B. Reporting Responsibilities:

The Council's GIS Manager will be responsible for communicating regularly with the MetroGIS Staff Coordinator regarding achievement of approved MetroGIS work programs in a manner acceptable to both parties and will ensure that the resources provided are responsive to the needs of MetroGIS. A minimum of 1.25 FTEs, shall be allocated to MetroGIS support staff to accomplish the individual components of the approved MetroGIS work plan, the major components of which include:

1. Provide data management oversight to ensure interoperability of endorsed regional datasets.
2. Provide technical coordination of tasks needed to effectively execute MetroGIS's Business Information Needs Process.
3. Manage MetroGIS DataFinder website, including regular updates of metadata, and associated data distribution application.
4. Represent MetroGIS technical needs and accomplishments in efforts with similar objectives (e.g. MN Governor's Council on Geographic Information, MN GIS/LIS, consortium stakeholder activities and other activities as the opportunity arises.)
5. Assist the Staff Coordinator with outreach and communication tasks regarding technical aspects of MetroGIS.
6. Serve as project manager for technical projects, such as
 - a) Assistance with the technical database design aspects of the business information needs process.
 - b) Technical advice to MetroGIS to address related issues and opportunities.
 - c) Support for data development and testing of applications that improve usability and access to regionally significant data and MetroGIS-endorsed products of said data.

C. Major Tasks:

1. DataFinder Technical Support (.25 FTE)
 - a) Perform and then evaluate the roles and responsibilities and associated time allocations as outlined by Lynne Bly and Associates for support of the DataFinder website and recommend modifications, as appropriate.
 - b) Support programming to maintain and enhance functionality of and user satisfaction with the DataFinder site.
 - c) Provide and administer a procedure(s) to encourage timely submission of metadata updates from producers of regionally significant datasets. (Development of metadata for regional significant datasets is a requirement set forth in regional custodian agreements.)
 - d) Conduct research to evaluate opportunities and needs pertaining to coordination with Minnesota's Geospatial Data Clearinghouse and the Federal Geographic Data Committee's (FGDC) Clearinghouse policies and procedures.
2. Regional Database Administration and Technical Support (.25 FTE)
 - a) Provide leadership to develop and support a distributed mechanism to provide access to regionally significant data, including developing applications to improve ease of access and coordinating with the Metropolitan Council's Information Systems (IS) staff to coordinate operation of FTP and Internet Map Server (IMS) hardware and applications.
 - b) Support the testing, organization, standardization, and maintenance of data formats to ensure interoperability of regional datasets.

APPENDIX F: **SUMMARY OF INTERVIEWS WITH COUNTY DATA PRODUCERS**

Introduction

In April and May 2002, MetroGIS staff contacted data producers to discuss a variety of issues concerning distribution of parcel data. In addition, county representatives convened on June 5, 2002 to discuss staff findings.

The following is a summary of findings from individual interviews:

- a) Assessing Demand for Parcel Data
 - The size of market demand from the private sector for online access to parcel data with attributes is not well understood. Some of the counties do not receive a significant volume of requests for parcel data.
 - The market may evolve if data is more readily available, and may include firms that develop applications for sale of information and maps to other companies.
 - The market may also include firms that are involved in some type of regional planning, without the need for the level of detail that is now provided through County Assessors.
- b) Anticipated Benefits to Producers
 - Each county varies in terms of the type and quality of data available, and the ease with which this data can be acquired
 - For most counties, since sales of parcel data are not significant, the impact on staffing would not be expected to be significant, at least initially
 - At least 2 counties, however, project measurable staff savings (Ramsey and Scott)
 - Greater positive impact may be realized by counties that use DataFinder to distribute county datasets other than parcel datasets through the web
 - It is possible that negative impacts on staffing could result from an increase in requests from the public, as a result of more readily accessible information that needs explanation and follow-up.
- c) Each county indicated willingness to:
 - Allow subsets of their datasets to be downloaded (for a given unit price, to be determined by each county).
 - Allow for the same datasets as have been developed for public sector distribution, with PIN and 24 attributes, to be distributed to the private sector (for a given unit price, to be determined by each county).
 - Use a single uniform licensing procedure for data distribution to the private sector.
- d) Other issues
 - One county expressed concern about enforcement of license provisions regarding resale of purchased datasets. However, the significance of this concern may be diminished with the ability to customize downloads, reducing the marketability of data purchased. It should also be noted that at least 2 counties do not require a license for purchasing data, and therefore do not identify resale of data as a concern.

APPENDIX G:
RECOMMENDED TACTICS FOR IMPLEMENTING STRATEGIES FOR
SUPPORTING THE METROGIS MISSION

These tactics were developed through discussions with the MetroGIS Business Plan workgroup, and are captured here to provide detailed direction for MetroGIS in addressing the challenge area of "Supporting the MetroGIS Mission":

- a) Maintain currency of MetroGIS Website (www.metrogis.org) with information that accurately documents MetroGIS's mission, activities, accomplishments, participants, processes and opportunities for participation.
- b) Increase public awareness through interviews, speaking engagements, responding to requests for information, stories in publications, and newsletters, surveys, and events.
- c) Develop, with stakeholder involvement, a clear statement of what it means to be actively involved in MetroGIS.
- d) Ensure that meetings, agendas, materials are well-framed, meaningful, and concise.
- e) Continue to expand the number of metro region stakeholders using MetroGIS services and participating in regional geodata policy development.
- f) Host user forums and workshops.
- g) Evaluate operating guidelines for the organization such as alternate representatives, definition of quorum, etc.
- h) Develop a process for rapid replacement of members who leave or who cannot fully participate
- i) Encourage support and involvement of staff from stakeholder organizations, including management and technical staff.
- j) Assess existing methods for gaining local involvement, in particular, user groups. Consider their purpose/mission and effectiveness at ensuring local involvement.
- k) Evaluate current activities of user groups relative to purpose and budget.
- l) Increase opportunities for small group discussion of issues and opportunities prior to consideration by the Coordinating Committee, which were lost when the Policy Advisory Team was dissolved; examples include formation of ad hoc subgroups to work on issues of particular interest to subgroup members.

APPENDIX H:
CHRONOLOGY OF EVENTS RELATED TO PARCEL DATASET DISTRIBUTION

1. April 2000: The Policy Board directed creation of a workgroup to develop a plan to coordinate distribution of parcel data to non-government interests. Commissioner Kordiak, Vice-Chair of the Policy Board, was appointed to chair the workgroup.
2. May to July 2000: The workgroup was formed and comprised a cross-section of private sector interests, representatives from each of the seven counties, and the Metropolitan Council. It met three times and agreed on a recommendation that was adopted by the Policy Board at its July 2000 meeting.
3. October 18, 2000: The Policy Board modified its July action and encouraged each county to enter into a multiparty agreement. Key provisions of the proposed agreement were a per parcel fee of not more than \$0.05 for parcel polygons with a minimum of two attributes (PIN and parcel address), a single license agreement, and distribution only as a whole via CD. The detailed summary of the events leading up to the October 18 Board action is provided at <http://www.metrogis.org/data/datasets/parcels/index.shtml#private>.
4. May 2001: The multi-party agreement, as anticipated by the October 27, 2000 Board action, went into effect authorizing the Metropolitan Council to assemble parcel data produced by the seven counties and distribute it to non-government interests. It called for an annual reevaluation of the processes, fees, data specifications, etc.
5. April 3, 2002: Syncline delivered a Scoping Study that provided a design and cost estimate to add an eCommerce extension for MetroGIS DataFinder Café - MetroGIS's new Internet-enabled customized data viewing and downloading tool. See http://www.metrogis.org/data/datafinder/index.shtml#data_distribution for the final report. Implementation of this capability would extend the new robust data viewing and downloading capabilities supported by DataFinder Café to support Internet distribution of parcel data to non-government interests. The cost of the study, about \$12,000, was paid with MetroGIS project funds allocated to MetroGIS by the Metropolitan Council.
6. April 10, 2002: In preparation for the annual reevaluation of the subject multi-party agreement, staff reported to the Policy Board that that no sales had occurred since the dataset had been made available in June 2001 and informed the Board that interviews would begin shortly to investigate the reasons. Board members offered suggestions for the proposed investigation.
7. April through May 2002: Staff interviewed a number of private sector interests thought to have an interest in parcel data to investigate why they had not shown an interest in the regional parcel dataset. See *Item II(4)* in the Reference Section* for a summary of the findings and highlights from the actual interviews.
8. May 6, 2002: The multi-party agreement, which authorized assembly and distribution of version one of the regional parcel dataset for private sector interests, terminated. No sales had occurred. Only two inquiries had been received in nearly a year. Notwithstanding, through this initial effort a common license was able to be agreed upon and technology is now in place to address the desire for access to less than the entire dataset, the only option under the initial agreement.
9. May 6- May 24, 2002: Staff met with representatives from each county individually to discuss findings of from interviews with the private sector and to share the findings of the eCommerce Needs Assessment. See *Item II(2)* in the Reference Section* for the findings and highlights from the actual interviews.
10. June 5, 2002: Staff met with representatives from five of the seven counties – all seven were invited – to summarize the findings of all of the interviews and to answer any questions they may have about functionality of the new MetroGIS DataFinder Café and the related eCommerce Scoping Study. See *Item II(3)* in the Reference Section* for the meeting summary. In general, most felt that pursuing an eCommerce extension to DataFinder would be beneficial to their operations.
11. June 19, 2002: Recommendation from Coordinating Committee as presented in Attachment C. An excerpt of the meeting summary is provided in *Item II(5)* of the Reference Section.*
12. July 30, 2002: Policy Board accepted recommendation of Coordinating Committee, and directed the creation of a Producer Workgroup (http://www.metrogis.org/teams/cc/meetings/m_09_25_02.pdf).

*Refers to the Reference Section of the staff report presented to the MetroGIS Policy Board at its October 22, 2002 meeting.

APPENDIX I

SUMMARY OF INTERVIEWS WITH PRIVATE SECTOR

Introduction

In May and June 2002, Metro GIS staff contacted businesses that were identified as being potential purchasers of parcel datasets. This review was undertaken as a follow-up to the development of a process to respond to private sector interest in a one-stop shopping option for acquiring parcel datasets. Businesses were asked why they are not currently purchasing a regional dataset available on CD ROM through MetroGIS, and also whether they would be interested in purchasing regional datasets or partial regional datasets if such could be downloaded from an internet site. The following is a summary of contacts made and findings.

Businesses Contacted

Business Name	Contact Person
GeoSpan	Steven Gilkey
Barclay Maps	David Clausen
Geographic Data Technology (GDT)	Barb Seninor
CB Richard Ellis	Steve Lehr
URS/BRW	Brad Henry
The Lawrence Group	Larry Charboneau
Bancor Group	Paul Robinson

Summary Findings

Businesses contacted included companies that develop and distribute data as their core business, as well as developers, an engineering firm, and a map services company. Interest in parcel data varied depending on the core business of each company contacted. Some companies like **CB Richard Ellis** are interested in purchasing the entire regional dataset, and therefore are concerned about price more so than access issues. Mr. Lehr commented that a \$48,000 price for the regional data set was too high compared to the value of this data; but that they would be interested in purchasing data if the price was more in the range of \$10,000 - \$15,000 per year. He pointed out that in addition to the cost of purchasing data, considerable development costs must be undertaken in order to make a saleable product, and all these costs must be recoverable in order to make a worthwhile initiative.

Barclay Maps indicated that they are in the business of developing and distributing parcel data to government and private sector interests. David Clausen of Barclay Maps indicated that the market for parcel data falls into five tiers:

1. Cities and Counties
2. Utilities including telecom and internet
3. Special districts such as watersheds, sanitation districts and schools
4. The real estate community
5. General business market (e.g. engineering firms)

Mr. Clausen indicated that the markets with the highest return are the first two tiers, including cities, counties and utilities. Since the model in the Twin Cities region is for counties to develop parcel data and make this available to cities within their county, the first tier market is not an option. However, opportunities may exist in the second tier market of utilities, including telecommunications and internet firms. Mr. Clausen also indicated that developing markets with the real estate community and the general business market are the hardest sale and the most difficult to ensure a reasonable return on investment.

GeoSpan is a company that serves the real estate community with video images of properties. This company is not interested in additional attribute data, since they need only addresses associated with each parcel. They are presently providing service to the Star Tribune newspaper. They may or may not be interested in parcel datasets, but did indicate the price of 5 cents per parcel is too high for them to be interested.

Geographic Data Technology is a business geographics company. They are interested in street centerline and address data and serve delivery, transportation, and in-car navigation system companies. They are not likely to be interested in subsets of regional data, but rather would be interested in the entire regional dataset. However, in order to keep the price of data acquisition down, they might be interested in a subset of the regional dataset that would include just the cities of Minneapolis and St. Paul.

Two companies indicated strong interest in online one-stop shopping data access that would allow for purchase of partial datasets. **URS/BRW**, represented by Brad Henry, stated that online data access would greatly reduce labor costs associated with data discovery and access. He indicated that URS/BRW staff must make multiple calls to counties for data, which requires a significant investment of company resources. Paul Robinson of **Bancor Group** indicated an interest in partial datasets and a willingness to purchase data at 5 cents per parcel. Larry Charboneau of **The Lawrence Group** indicated that providing the ability to select partial datasets and the availability of 24 attributes would make the data more appealing, which would likely result in greater interest in acquiring parcel data through the one-stop shop of DataFinder Café.

Additional Follow up

Additional contacts will be made in June and early July with companies representing two major areas:

1. Utility Companies (including Reliant Energy and Xcel Energy)
2. Major real estate groups (including the Multiple Listing Service and large real estate companies)

These potential markets will be explored since it is thought that interest in good quality and current parcel datasets may exist here, based on interviews completed to date.

APPENDIX J:
PRELIMINARY INVENTORY OF COUNTY GEODATA APPLICATIONS

Organization	App. Name	App. Function/Comments	URL or Intranet
Anoka		We don't have much on the order of "End-user" applications except we do have a intranet page that you can type a Pin number or address into and it will spit out more attribute information. Otherwise, we have multiple avenue scripts, avenue extensions, Foxpro programs, and MS Access databases with macros, set up for parcel attribute maintenance, radius and ad hoc parcel searches.	
Carver		All of applications are intranet based at this time. We are working on getting a new webserver where we will be on the internet. Our Intranet applications include:	
Carver	Parcel Search	This is an application that allows you to search the parcel dataset by a)PID #, b) Name of Taxpayer, and c) Address. The application zooms to the parcel that was searched, highlighting the parcel with hatched lines. The aerial photo turns on at a certain scale with parcel lines and road annotation superimposed on the aerial.	
Carver	School District 112	This application was created for ISD112 for use with area attendance questions. The school district often gets calls from residents of Chaska, wondering what school their children will attend. The District employee will enter their address in the application and the application zooms to the parcel in question. Under the parcel data is a school attendance area that quickly allows the school district employee to see what attendance area the child lives in.	
Carver	Ravine & Bluff	This application was created for 2 purposes. The first purpose was to get the Ravine and Bluff study out to the public. This site contains bundles of information in a PDF format that are hyperlinked to the ArcIMS map. The second purpose was to easily display data for internal work and study within the county.	
Carver	Planning and Zoning	This application was requested by the Planning and Zoning department. This app mimics an ESRI ArcView 3.x project that P&Z created. This app loads faster than the AV project and allows the front desk to show customers their parcels, and other shapefiles that are pertinent to the situation.	
Dakota	GIS Web Apps. Page	General page listing all GIS web apps.	http://www.co.dakota.mn.us/survey/info/gisapps.htm
Dakota	Bench Marks	These documents were developed by the Survey unit of the Survey and Land Information Department. They are viewed by clicking on HTML hyperlinks that display the selected township's bench marks in PDF®. They are updated as needed.	http://www.co.dakota.mn.us/survey/bench_marks.htm
Dakota	PLS Corner and Control Map	This application was developed by the GIS unit of the Survey and Land Information Department, in cooperation with the Survey unit of the Survey and Land Information Department, for the purpose of online, web-enabled map retrieval of Public Land Survey corner and horizontal and vertical control information with links to NGS Data Sheets. This application was developed in-house using MoIMS®. The data is updated as needed.	http://www.co.dakota.mn.us/survey/pls.htm

Dakota	Real Estate Inquiry	The Real Estate Inquiry was developed by the GIS unit of the Survey and Land Information Department, in cooperation with the Assessing Services and Treasurer - Auditor Departments, for the purpose of online real estate and tax information retrieval with links to the plat of which the property resides. This application was developed in-house using MoIMS®. The parcel and tax data are updated monthly, the physical features and plats are updated as needed.	http://www.co.dakota.mn.us/assessor/real_estate_inquiry.htm
Dakota	Recorded Plats and Surveys	This application was developed by the GIS unit of the Survey and Land Information Department, in cooperation with the Property Records Department, for the purpose of online retrieval of CIC Plats, Registered Land Surveys, Right of Way Maps, and Subdivision Plats. This application was developed in-house using Access® databases and ASP. The HTML interface allows users to locate a recorded plat or survey by name and view the corresponding documents in PDF® format. Updated as the documents are officially recorded.	http://207.171.98.200/plats/index.htm
Dakota	Section Subdivisions	These documents were developed by the Survey unit of the Survey and Land Information Department. Click on HTML hyperlink that displays the selected townships, then selected section, and view the corresponding document in PDF®. Updated as needed.	http://www.co.dakota.mn.us/survey/section_subdivisions.htm
Dakota	Standard Property Map Locator	This application was developed by the GIS unit of the Survey and Land Information Department, for the purpose of online retrieval of half and full section property maps. This application was developed in-house using ArcIMS® and PDF®. Updated as parcels are officially updated.	http://www.co.dakota.mn.us/survey/data/section_maps.htm
Dakota	Tax-Forfeited Parcels	This application was developed by the GIS unit of the Survey and Land Information Department, in cooperation with the Treasurer - Auditor Department, for the purpose of online tax-forfeited property searches. This application was developed in-house using an Access® database, ASP, MoIMS® and ArcIMS®. It incorporates tax related information, site maps, and a photo of the property when available. Updated as needed.	http://www.co.dakota.mn.us/treasurer/taxforfeit/forfeit.htm
Hennepin	Property Information Search	This is a PID or address search application in MapObjects. The view map button supplies the map portion. No other real GIS query available now.	http://www2.co.hennepin.mn.us/pins/pidsrch.jsp
Ramsey	GEOSPARC	The ArcIMS site "GEOSPARC" is a County-City project. Currently it is available as an intranet site. GeoSparc will soon become available on the internet. We also will have a county surveyors website available. It will have electronic half section maps, plats, and survey data. The three applications available now can be used by people without any special GIS software or any of their own GIS data. - Notification Labels: should be used if the user wants to create labels for addresses using a buffer. (i.e. sending a mailing to addresses 350 ft from a proposed liquor licensee) - Standard Map Query: is used to get geographical and tax information by searching for an address, PIN, or street intersection. - Aerial View: This application contains Aerial photographs of Ramsey County, and dimensions of parcel lines - A fourth application is for users who have access to additional "local" GIS data	

Scott	GIS Web Apps Page	General page listing all GIS web apps.	http://www.co.scott.mn.us/gis/imspage.htm
Scott	Property Information Search	This application allows users to search for property using a variety of different queries. The result of the query is a map and specific information for that property. Users are allowed to search by property identification number, owner name, site address, or manually by panning and zooming.	http://www.co.scott.mn.us/gis/imspage.htm
Scott	Half Section Mapper	This application allows users to view county data by half section. There are four different types of half section maps available: aerial, parcel, planimetric, and zoning. Users enter the township, range, section, and direction of the area they are interested in, and they get back a map.	http://www.co.scott.mn.us/gis/imspage.htm
Scott	Quick Map	This application allows users to search on the parcel base map like the Property Information Search, but it allows you to overlay layers on the parcels. The layers include; 1990 aerials, 1997 aerials, 2000 aerials, floodplains, wetlands, soils, zoning, lakes, streams, and groundwater susceptibility. It also allows users to create their own map layouts, give the map composition its own title, in landscape or portrait format.	http://www.co.scott.mn.us/gis/imspage.htm
Scott	Section Corner Ties & Section Breakdowns	This application allows users to access Public Land Survey System (PLSS) section corner tie information. The interface allows a user to specify a section, township and range and then select by number the section corner tie that they are interested in. The result is a document in PDF format that can be printed out.	http://www.co.scott.mn.us/gis/imspage.htm
Scott	ScottView	ScottView allows the user to view maps that are in a one page format. All maps are to scale (one inch equals 500 feet). The maps are very useful for finding specific addresses if you know the general location of the property.	http://www.co.scott.mn.us/gis/scottview/html/scottview.htm
Scott	Map Compositions	Check out all of our static map productions at our map composition site. The maps are available in numerous formats for download and printing.	http://www.co.scott.mn.us/gis/mapcompositions.htm
Scott	other	We have numerous AV applications including... Half Section Mapper Assessing Tools Extension CREP Tool Hydric Soil/Property Calculator Image Alchemy Extension PIN Anomaly Checker	
Washington	Parcel Search	to name a few. If I think of more, I will forward those to you. We have a Map Objects IMS site on our intranet that has been up since 2000. It has the same basic info as Dakota County's site. We have a new ArcIMS site that we are piloting at http://s98200.co.dakota.mn.us/website/washco/parcels . We have encountered some difficulty with displaying the dimensions and a couple performance issues. Other than that, we hope to have it go live by August.	http://s98200.co.dakota.mn.us/website/washco/parcels

Metropolitan Council	1997 Land Use Products	<p>The Metropolitan Council creates a land use inventory for the Twin Cities metropolitan area every few years. This dataset is then compared to previous years to analyze land use change, and also plan for the future. This interactive land use application includes a map showing 1997 land use data and also charts and tables comparing land use statistics between 1990 and 1997. 1997 land use "printable" maps are also available for each municipality in the Twin Cities area.</p>	http://gis.metc.state.mn.us/interactive_maps.asp
Metropolitan Council	Mississippi Riverfront Map	<p>1927 aerial photos provided by the USACE - St. Paul District highlight this interactive map. As part of the Mississippi Riverfront, Pool 2 initiative the Council acquired 50 scanned photos of the area. In this map, the 1927 photos can now be compared to more current information, like 2000 orthophotos, roads, highways, and the Mississippi National River and Recreation Area boundary. Click on this link to learn more about the Mississippi Riverfront Initiative.</p>	http://gis.metc.state.mn.us/interactive_maps.asp
Metropolitan Council	MetroGIS DataFinder Interactive Maps	<p>Several Metropolitan Council datasets are included in interactive maps on the DataFinder site. Many of the GIS datasets are also available for download on DataFinder.</p>	http://gis.metc.state.mn.us/interactive_maps.asp