Land Records Modernization Committee Report to the Minnesota Governor's Council on Geographic Information

June 1999

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Land Records Modernization Committee

REPORT TO GOVERNOR'S GEOGRAPHIC INFORMATION COUNCIL

The committee was on outgrowth of the Investments/Funding Committee, which started in 1994. The Land Records Modernization Committee identified the following three possible initiatives to focus on: 1. Work with the Legislative Commission on Minnesota Resources (LCMR) to fund a GIS related pilot project, involving county clusters, existing regional areas, or individual counties and to encourage the LCMR to develop a GIS related RFP that pro-actively funds long term GIS projects; 2. Investigate existing funds that will become available through state and federal sources as means to support GIS development; 3. Examine strategies for legislative funding of GIS. The committee focused its efforts on initiative 3.

We began by researching legislation or proposed legislation of GIS funding approaches across the nation. Three states were found to have enacted legislation or were in the process of proposing legislation. They were Michigan, New York and Wisconsin. A review of the legislation indicated there were the following seven common elements to the funding proposals:

- Created a coordinating body and define the members.
- Defined the mission, duties and powers of the coordinating body.
- Provided for the creation of a dedicated fund from which aid to local governments can be granted.
- Provided for the adoption of a local government plan by the coordinating body before grants and aid are given.
- Provided for a portion of the funds collected to be kept by or returned to local governments.
- Provided for data coordination at a statewide level.
- Provided funding through fees or taxes on real property transfers, such as recording fee increases, a special fee added to the recording fee or deed tax or real property tax increases based on the value of the property.

A series of questions about each of the seven common elements were formulated and the committee members were asked to react to the questions. The basic ideas of what should be included in any potential GIS legislation was formulated from the answers to the questions.

In the next year the committee began looking at the Wisconsin legislation as a possible funding model for Minnesota. Wisconsin's model grew out of a need to improve the paper record keeping system and provide for improved data access. The efforts of the Minnesota county recorders to modernize their systems by using microfilm and optical scanning technologies addresses some of the issues found in Wisconsin. The committee felt the issue in Minnesota may be one of integration of the county land records, which would create a parcel based land records of standards. In the spring of 1996 the committee presented an outline of a Land Records Modernization Program to the Council. The Council approved the concept of the plan.

In 1996 a subcommittee was formed to identify and recognize organizations across the state who have developed useful GIS data and those that have a successful record of GIS data sharing. Out of the work of this group the Governor's Council certificates of commendations were developed.

In October 1996 a Revised Version of the Land Records Modernization program was presented to the membership of the GIS/LIS consortium at the annual conference. The presented model seemed to generate some interest. At the same time a preliminary legislative initiative proposal was presented to the executive budget team through Minnesota Planning. The budget initiative did not make it into the governor's budget mainly because we could not provide evidence of local government support or a compelling state interest for the program.

In 1997 the committee began to refine the LRM proposal and to search for strategic partners. One key group the committee identified was the Association of Minnesota Counties (AMC). Other groups included the Minnesota Association of County Officers (MACO) and the League of Minnesota Cities (LMC). A one page description of Land Record Modernization was developed as a hand out when meeting with groups. This hand out formed a basis for discussing the concept of a Minnesota Land Records Modernization program.

Land Records Modernization concept was presented to the League of Minnesota Cities. The committee made a presentation to the AMC general government policy committee in the summer of 1997. The policy committee was asked to pass a resolution supporting the concept of land records modernization. The committee made the same presentation to the Metro GIS Policy committee and also asked that they pass a resolution to support the concept of land records modernization. The AMC and Metro GIS committee did pass resolutions to support the concept of land records modernization without supporting a specific proposal. The AMC and LMC then formed a joint committee to review the current proposal and work with the Governor's Council on refining the proposal. This joint AMC and LMC committee developed the idea of a pilot project to determine the potential of a statewide program.

The Land Records Modernization committee decided to pull the Land Records Modernization program off the table and try to refine the document with the input from the AMC-LMC joint committee. We also decided to work on a spreadsheet to help develop a funding and distribution model. Most of the issues identified related to the amount of aid a county could get with the proposal. We researched information such as the number of parcels there were per county, the number of certificates of real estate value issued and the number of deeds recorded per year. This data was entered into the spreadsheet to see how the funding could be allocated. We started with a funding program amount of $5 million dollars per year and raised it to $10 million dollars to reflect what we felt was an appropriate amount. At the same time a draft set of minimum standards was developed. Work on the standards is not completed. A one page executive summary of the proposed program was developed as a preface to the document or a stand-alone hand out.

In 1998 the county recorders, county auditors and county treasures associations have passed resolutions asking the Governor's Council to develop statewide standards for land records system. For Minnesota the committee agreed that the model needed to include the land records system connected to the geodetic reference system, a county plan and a minimum level maintenance and to review systems already used in cities and counties to discover their pros and

cons and address compatibility issues. The committee decided to develop a proposal for a Study/Pilot project for the next biennium that will be submitted to Minnesota Planning for the budget process. The study would develop a logical model of modernized land records within county and pilot projects that would implement components of the model to provide model validation. The model would be tested in a metro and non-metro county, in a county with automated land records and one with a manual system and in contiguous counties to test data sharing.

It is the recommendation of this committee that it be disbanded and further work on a Land Records Modernization program be suspended until the Study/Pilot projects are completed.

Respectfully submitted by the Land Records Modernization Committee:

Luci Boztek, co-chair	Will Craig
Jeffrey Grosso, co-chair	Richard Johnson
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MINNESOTA LAND RECORDS MODERNIZATION PROGRAM

OVERVIEW

Purpose: This program seeks to provide the resources and direction needed to modernize county land records information systems while also enhancing the usefulness of land information for purposes related to improved land and resource management, comprehensive planning, service delivery, and support of government operations.

Objectives: The program seeks to promote the following objectives.

- **Enhance Local Capacity for Land Records Modernization.** To assist local governments with resources and advisory services related to the funding, organization, and management of effective, integrated land records information systems.
- **Promote Data Integration.** To promote and support the local development of land records information systems that are consistent with regional and state land record information needs and that can be integrated to address issues that extend beyond local jurisdictional boundaries.
- Improve Access to Land Records Information. To improve and expand services to business and the public by making information about land records more readily available.
- **Provide Technical Assistance.** To assist local governments with advisory services related to the design, development, implementation and management of effective, integrated land records information systems.
- **Provide Funding.** To establish an adequate and appropriate source of funding for local government development and implementation of comprehensive and coordinated modernized land records information systems and the administration of a statewide program.
- **Improve Local Government Efficiency and Effectiveness.**
- **Improve Tax Equity Across the State.**

DEFINITIONS

Land Records. The data, information or maps regarding any physical, legal, economic, or environmental characteristics concerning land, water, groundwater, subsurface resources, or air within Minnesota. Such records include, but are not limited to, the following.

Geographic references. Geodetic control systems, land survey records, land ownership boundaries.

Administrative records. Jurisdictional and administrative boundaries; land use; land use controls and restrictions; land value; property tax records; related property information; property ownership; site addresses.

Built environment. Transportation infrastructure, utility infrastructure, planimetric information, historic and prehistoric sites and contaminated sites.

Natural environment. Geology, hydrology, land cover, minerals, soils, unique natural areas, wetlands, topography and wildlife.

Land Records Modernization. The improvement and updating of the processes and procedures for collecting, sharing, utilizing, presenting, maintaining and storing land records through the efficient and effective use of technology.

ORGANIZATIONAL STRUCTURE

Overview: The land records modernization program will be directed by a Policy Board, with advice from an Advisory Committee and administrative support from an executive branch agency of state government.

POLICY BOARD

A land records modernization policy board, comprised of a broad and diverse membership, will oversee the land records modernization program.

Duties and responsibilities: The policy board shall have the following duties and responsibilities.

- Sets program policy and operational guidelines.
- Oversees use of program funds.
- Sets direction for administrative staff.
- Approves local land records modernization plans
- Approves land records modernization grant awards.
- Promotes improved access and use of land records.

Membership: Members to the board shall be appointed by the Governor and chosen to reflect a diverse membership with balance among city, county, regional and state entities.

Technical Advisory Committee

A land records modernization technical advisory committee, comprised of a diverse and balanced membership with appropriate technical expertise, will provide advice to the policy board.

Duties and Responsibilities: The advisory committee shall have the following duties and responsibilities.

- Advise the policy board regarding technical and operational issues related to the design and

implementation of modernized land records information systems.

- Develop guidelines for and review local land records modernization plans and recommend appropriate action to the policy board.
- Develop guidelines for and review local proposals for land records modernization grants and make recommendations to the policy board about the proposed projects.

Membership: Members shall be appointed by the land records modernization policy board and chosen to reflect the interests and expertise of local government, state government, educational and research organizations, professional organizations, and the private sector.

PROGRAM ADMINISTRATION AND SUPPORT

The land records modernization program will be administered and supported by an executive branch agency and take policy direction from the policy board.

Designated Agency: Program administration will be the responsibility of the Minnesota office of strategic and long range planning, with technical support provided by the land management information center.

Duties and Responsibilities: The executive branch agency will be responsible for duties that include, but are not limited to, the following.

- Develop program documentation and procedures for policy board review.
- Provide technical and administrative support for the land records modernization plan review process.
- Provide technical and administrative support for the land records modernization grant review process.
- Support efforts to develop and promote land records modernization standards and guidelines.
- Provide technical assistance to local government, as needed to effectively implement the program.

LOCAL MODERNIZATION PLANS

Plan Requirement: To be eligible to participate in the state land records modernization program, counties must prepare and submit a land records modernization plan that reflects the goals of the program. The plan must be accepted by the policy board as complying with requirements established by the board.

Plan Elements: Each county plan will contain a number of elements, including but not limited to the following.

- **Land Records Modernization Officer:** A designated land records modernization officer, officially designated by the county as being responsible for plan implementation and

compliance.

- **Adherence to Standards:** Evidence that the plan adheres to standards and guidelines for land records modernization, as approved by the policy board.
- **Data Access:** Provisions for providing access to and availability of information and data created with program funds.
- **Geographic Referencing:** Provisions for geographic referencing of all data related to land records.
- **Data Integration:** Provisions for including and integrating data and information regarding both the built and natural environments.
- **Identification of Priorities:** Identification of land records modernization priorities for a minimum of five years.

ALLOCATION OF PROGRAM FUNDS

Local Base Funds. Most funds available for the land records modernization program will be allocated to eligible counties based on a formula that reflects the number of transactions related to land ownership changes or development, with the precise amount and method to be approved by the policy board.

Eligibility. To be eligible to receive land records modernization funds from this program, counties must meet the following conditions.

- Designate a land records modernization officer through an act of the county board of commissioners. The designee should be a county officer or employee knowledgeable about the issues and practices of land records modernization and related information technologies.
- Prepare, submit and receive approval of a county land records modernization plan that complies with standards and guidelines adopted by the land record modernization policy board.
- Identify the purposes for which the program funds will be used, consistent with planned activities and investments as indicated in the county's approved plan.
- Assure that program funds will not displace local funds already committed to land records modernization purposes.

Local Grant Funds. A smaller portion of funds available for the land records modernization program will be allocated to counties, or groups of counties acting together, through a grant program targeted to areas that would otherwise not receive adequate funding to initiate a meaningful program or for projects that have special significance to the long term success of the land records modernization program statewide.

Eligibility. To be eligible to receive land records modernization grant funds, counties must meet the basic eligibility requirements for local base funds, except where grant funds are needed to prepare, revise, or seek approval for a land records modernization plan.

Grant Criteria. Criteria for awarding land records modernization grants will be established by act of the policy board and may take into consideration the following circumstances.

- A base allocation is too low to adequately fund a county effort.
- A grant is requested for an innovative project that promises to have benefits as a demonstration or prototype for other counties.
- A grant will supplement local funds in ways that will have a significant local impact.
- The proposed project promotes the integration of information resources and cooperation among organizations.
- The project has a high probability of successfully achieving its goals.
- The project will result in a specific and tangible product of value to land records modernization.
- The project is consistent with the county land records modernization plan.

Funds for Administration and Support. The program will provide adequate funds to the executive branch agency responsible for administering the program and providing technical support. However, such funds will be limited to no greater than five percent of the total funds available for the program. Funds will be used for; (1) board and committee support, (2) program administration, (3) standards development, (4) modernization plan reviews, (5) data coordination, and (6) technical support.

FUNDING SOURCES

Basic Premise. The program will be supported by revenues generated by land transactions, thereby directly linking the funding source to the intended purpose. Funds generated would be managed through a dedicated state account and made available as prescribed by program guidelines.

Funding. Funds for the land records modernization program would be provided by one of the following sources, with funds earmarked for the program.

- Surcharge on recorder fees.
- Mortgage registration tax.
- Deed transfer tax.
- Plat recordation fee.
- Survey filing fee.
- Sales tax applied to survey services.

ANALYSIS OF CRITERIA FOR DISTRIBUTING STATEWIDE LRM FUNDS

Background

The Governor's Council LRM Committee has been working for some time on conceptualizing a statewide program to fund county efforts to build parcel-based land information systems. The program's basic principles have been derived from the Wisconsin Land Information Program, which is generally viewed as a successful model that should be adapted to Minnesota's needs. While many issues need to be resolved to completely specify a viable proposal for a Minnesota program, this briefing assumes that a source of funds has been identified and focuses on alternate methods for allocating those funds.

Allocation Issues and Assumptions

Several basic assumptions must be made in order to assess alternate allocations. Although the LRM committee has reached consensus about some of these assumptions, no official decision has been made for most of them. The basic questions that must be answered are:

- What is the annual program budget?
- How much of the budget is needed to administer the program and provide a core level of technical services to counties?
- How much of the budget should be reserved for grants addressing special needs or for projects that make strategically important contributions to the overall goals of the land records modernization program?
- What minimum funding should be reserved for all counties to assure a meaningful effort?
- How should the remaining funds be allocated among counties?

The following assumptions have been made for the purposes of this analysis. They do not reflect any final judgements on the part of the Governor's Council on Geographic Information. The basis for these assumptions is discussed in the narrative.

Annual Program Budget: $10,000,000

No supportable estimate of the total costs for modernizing land information systems within Minnesota exists. Such an estimate is needed. However, annual funding for Minnesota has been discussed as being somewhere between $5 and $10 million per year. Funding for the Wisconsin Land Information Program has ranged between $5 and $8 million per year. Wisconsin has 72 counties; Minnesota has 87.

A budget proposal for a statewide program made by Minnesota Planning for the 1997/1998 biennium was for $7.5 million per year. Legislation introduced in the 1998 legislative session,

which did not pass, provided for the retention of the existing mortgage and deed registration fees by counties, partly for the purposes of supporting GIS activities. These funds, most of which currently are retained for the state's general fund, were estimated to be more than $110 million for the 1998 fiscal year.

For this analysis, we assume that $10 million a year will be set aside for a statewide program, possibly funded directly out of a portion of the mortgage and deed fees currently allocated to the state's general fund. This represents about 10% of the total funds raised through such fees.

Administrative Costs: $250,000

A base allocation will be needed to administer and coordinate the program, support basic technical efforts to integrate data developed by county participants, and to provide basic technical support for counties. The estimate of $250,000 is slightly less than is currently budgeted to administer the Wisconsin Land Information Program, where funding has been adequate to provide only minimal technical support to counties. The amount assumed here, $250,000, would comprise 2.5% of the program's total costs and is considered to be an amount below which the quality of program coordination and technical support services will be compromised.

Grants for Special Projects: $1,000,000

The LRM Committee has recognized the need to provide funds that would meet special needs of individual counties, encourage new partnerships and other creative organizational solutions that support the long-term goals of the statewide program, or develop or test new procedures or technologies that would improve efficiencies for all counties. In some cases, a major investment that exceeds a county's capacity may be needed to initiate a project but not to maintain it. The Wisconsin Land Information Program had, for many years, reserved a portion of its budget for competitive grants. Although the practice has recently been abandoned, we feel that it is an appropriate element of Minnesota's Land Records Modernization program. The $1,000,000 represents 10% of the assumed total budget.

Base County Allocations, Minimum: $50,000

The LRM Committee has advocated parcel based land information systems for all counties in Minnesota. A minimum allocation has been recommended to ensure that this is possible. Until recently, the Wisconsin Land Information Program had no guaranteed minimum. One result was that small and rural counties were not provided adequate funds to undertake meaningful projects. The WLIP has recently adopted a $25,000 minimum, which has resulted in more active implementation in many of Wisconsin's non-metropolitan counties. We have assumed a $50,000 minimum, which is considered to more accurately reflect the minimum investments required.

County Allocation Criteria: Reflect Scale of Effort and Pace of Change

The Governor's Council has consistently advocated an allocation of funds that reflects, in some way, the level of effort required to develop and maintain a countywide parcel-based land information system. Factors that have been most frequently mentioned involve "the number of land transactions," although the value of the transactions has been implied through a linkage to the funding strategy.[1] Several alternate indicators have been considered to reflect the number of transactions.

Six of the allocation criteria that have been considered during the LRM Committee's work were considered in this analysis. Each was assessed relative to several evaluation criteria:

- **Information exists.** No new bureaucratic procedures or reporting requirements will be needed where procedures are already in place to collect the information or the information is readily known.
- **New activity.** Where new land development or transaction activity exist, new data development or information processing needs also exist.
- **Total effort.** Where a large number of parcels or large land holdings must be managed, information needs tend to be larger than where few parcels or small land areas must be managed.
- **Valuation.** Where land resources are most highly valued, the value of improved land information may be highest.

The following table provides a generalized summary of how each of the six indicators considered reflects the evaluation factors.

Allocation Criterion	Informati	Criterion Reflects		
		New	Total Effort	Valuation
Certificates of RE Value [#]				
Certificates of RE Value [$]				
Deeds [#]				
Parcels [#]				
Land Area				
Population Size				

The # of Certificates of RE Value and the # of Parcels were used to allocate the funds for the purpose of this analysis. They were equally weighted to reflect both the total effort required and the effort required to respond to new activity. Certificates of RE Value was chosen rather against counties least able to fund programs on their than Deeds because of the availability of CREV through existing reports made by counties to the Department of Finance. Parcels are also annually reported. CREV valuations were considered less preferable to the number of CREV's as they were judged to discriminate against counties least able to fund programs on their own.

1Early proposals specified that funds be generated through a mortgage or deed tax, with counties retaining a specified portion the total. To the extent that these fees reflect the value of transactions, the funds retained by each county would have also reflected value. We are assuming here that the source of program revenues is a separate issue from how the funds should be allocated.

LAND RECORDS MODERNIZATION PROGRAM

(Summary of Allocation Models)

County	Allocation Basis				
	(1) Deed #	(2) CREV #	(3) CREV $	(4) Parcel #	(2) & (4)
Aitkin	80,892	50,000	50,000	125,530	90,104
Anoka	394,340	409,428	291,826	292,654	353,023
Becker	73,032	73,307	50,000	71,403	72,589
Beltrami	50,000	58,877	50,000	74,477	66,756
Benton	50,000	50,000	50,000	50,000	50,000
Big Stone	50,000	50,000	50,000	50,000	50,000
Blue Earth	66,877	61,230	50,000	71,940	66,703
Brown	50,000	59,321	50,000	50,000	50,000
Carlton	50,000	50,000	50,000	74,656	59,064
Carver	109,062	108,962	84,274	67,860	89,002
Cass	124,850	108,784	69,482	127,653	118,429
Chippewa	50,000	50,000	50,000	50,000	50,000
Chisago	85,726	89,247	50,000	59,760	74,961
Clay	64,686	58,610	50,000	62,164	60,542
Clearwater	50,000	50,000	50,000	50,000	50,000
Cook	50,000	50,000	50,000	50,000	50,000
Cottonwood	50,000	50,000	50,000	50,000	50,000
Crow Wing	187,971	172,101	61,707	215,996	194,292
Dakota	482,743	524,251	535,029	341,720	435,732
Dodge	50,000	50,000	50,000	50,000	50,000
Douglas	70,424	66,381	50,000	68,561	67,658
Faribault	50,000	50,000	50,000	50,000	50,000
Fillmore	50,000	50,000	50,000	50,000	50,000
Freeborn	50,000	50,000	50,000	50,000	50,000

Goodhue	50,000	65,093	50,000	68,935	67,187
Grant	50,000	50,000	50,000	50,000	50,000
Hennepin	1,355,236	1,372,900	1,929,650	1,121,373	1,252,894
Houston	50,000	50,000	50,000	50,000	50,000
Hubbard	94,177	50,000	50,000	50,000	50,000
Isanti	50,000	59,454	51,598	50,000	50,000
Itasca	103,567	80,278	48,075	199,005	139,132
Jackson	50,000	50,000	50,000	50,000	50,000
Kanabec	178,303	50,000	50,000	50,000	50,000
Kandiyohi	80,127	74,018	50,000	71,451	72,975
Kittson	50,000	50,000	50,000	50,000	50,000
Koochiching	50,000	50,000	50,000	50,000	50,000
Lac qui Parle	50,000	50,000	50,000	50,000	50,000
Lake	50,000	50,000	50,000	50,000	50,000
Lake of the Woods	50,000	50,000	50,000	50,000	50,000
Le Sueur	50,000	50,000	50,000	50,000	50,000
Lincoln	50,000	50,000	50,000	50,000	50,000
Lyon	50,000	50,000	50,000	50,000	50,000
McLeod	50,000	79,168	84,110	50,000	63,759
Mahnomen	50,000	50,000	50,000	50,000	50,000
Marshall	50,000	50,000	50,000	50,000	50,000
Martin	50,000	50,000	50,000	50,000	50,000
Meeker	50,000	50,000	50,000	50,000	50,000
Mille Lacs	50,000	50,000	50,000	50,000	50,000
Morrison	66,981	50,000	50,000	75,845	62,343
Mower	98,837	60,564	50,000	50,000	59,173
Murray	50,000	50,000	50,000	50,000	50,000
Nicollet	50,000	50,000	50,000	50,000	50,000

Nobles	50,000	50,000	50,000	50,000	50,000
Norman	50,000	50,000	50,000	50,000	50,000
Olmsted	147,317	154,562	218,513	150,882	153,214
Otter Tail	140,778	125,390	50,000	149,516	137,680
Pennington	50,000	50,000	50,000	50,000	50,000
Pine	144,534	68,867	50,000	73,541	71,383
Pipestone	50,000	50,000	50,000	50,000	50,000
Polk	63,329	50,000	50,000	70,273	50,000
Pope	50,000	50,000	50,000	50,000	50,000
Ramsey	433,186	474,920	558,178	447,827	462,985
Red Lake	50,000	50,000	50,000	50,000	50,000
Redwood	50,000	50,000	50,000	50,000	50,000
Renville	50,000	50,000	50,000	50,000	50,000
Rice	78,214	69,222	50,000	63,013	66,367
Rock	50,000	50,000	50,000	50,000	50,000
Roseau	50,000	50,000	50,000	50,000	50,000
St. Louis	336,470	467,727	269,503	809,906	638,064
Scott	153,750	160,246	109,612	92,091	127,086
Sherburne	50,000	135,736	56,503	88,071	112,617
Sibley	50,000	50,000	50,000	50,000	50,000
Stearns	173,434	177,474	162,052	157,043	167,926
Steele	50,000	50,000	50,000	50,000	50,000
Stevens	50,000	50,000	50,000	50,000	50,000
Swift	50,000	50,000	50,000	50,000	50,000
Todd	50,000	67,135	50,000	62,092	64,849
Traverse	50,000	50,000	50,000	50,000	50,000
Wabasha	50,000	50,000	50,000	50,000	50,000
Wadena	50,000	50,000	50,000	50,000	50,000
Waseca	50,000	50,000	50,000	50,000	50,000

Washington	308,161	316,406	555,686	454,614	385,592
Watonwan	50,000	50,000	50,000	50,000	50,000
Wilkin	50,000	50,000	50,000	50,000	50,000
Winona	57,765	57,278	50,000	58,579	58,094
Wright	145,230	143,062	164,202	131,568	137,821
Yellow Medicine	50,000	50,000	50,000	50,000	50,000
Total to Counties	8,750,000	8,750,000	8,750,000	8,750,000	8,750,000
LRM Special Grants	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Adm & Tech Support	250,000	250,000	250,000	250,000	250,000
Total Amount	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Assumptions					
Total Funding	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Minimum Allocation	50,000	50,000	50,000	50,000	50,000
Allocation Factor	(1) Deed #	(2) CREV #	(3) CREV $	(4) Parcel #	(2) & (4)
Transactions/Value	213,456	169,950	10,400,787	2,589,907	n/a
Rate Per Unit/ Transaction	$ 46.85	$ 58.84	$ 0.96	$ 3.86	n/a

METHOD: This summary is based on the availability of total funds for LRM shown as an assumption. The allocation method distributes funds to all counties, subject to the minimum amount specified and an assumed amount for administration and technical support Funds are allocated in proportion to the factor noted. The Rate per Transaction/Unit shows the fee that would be required if the funding source was linked to the factor used for the allocation.

Standard Goals
Land Records Modernization

Introduction

This is a time of change and challenge for city and county government in Minnesota. Expectations of Minnesota local government often increase more rapidly than resources. At the same time, issues of land use & planning, environmental protection, economic development, management of natural resources, law enforcement, emergency response, and more often cross-jurisdictional boundaries to become regional in nature. Most of these activities require detailed and accurate information about land ownership, occupancy, and use. The land records infrastructure of Minnesota local government has in most cases not kept pace with the changing requirements being placed upon it. It will not be adequate to support the requirements of the future.

The proposed Minnesota Land Records Modernization program will not be a centralized system. Each local jurisdiction will build, maintain, and control its own system. This program exists two further two goals:

- To help local jurisdictions build and maintain modernized land record systems
- To help ensure that these records are maintained in a form that meets certain standard goals so that it can be effectively aggregated and used to address multi-jurisdictional questions.

Land records infrastructure must meet the following criteria in the 21st century:

- Speed of access
- Integrity of information
- Timeliness of information
- Completeness of information
- Shareability of information across departmental and jurisdictional boundaries

Toward these ends, we submit this list of standard land records modernization goals.

Land Records Modernization can include the following:

- Automating the indexing of land record transactions
- Automating the maintenance of property tax records
- Creating and maintaining a Geographic Information System of cadastral data.

To participate in the program, each County or City must have a Land Records Modernization plan that addresses at least one of the three general topics, A through C.

A) Automating the indexing of land record transactions

A Land Records Modernization plan including the Automated indexing of land record transactions must address how the unit of government will make progress toward the following minimum goals:

- Format Minimum Goal: Establishing a digital format in which data resides must be compatible with or easily translatable to at least one major RDBMS software format.
- Documents Indexed Minimum Goal: The following kinds of documents will be indexed: Real property deed transfer Real property lien attachment and release Grants of easement and right of way
- Mortgages

Information Indexed Minimum Goal: The following information about the documents will be contained in the index record as separate fields:

- Grantor
- Grantee
- Date of recording
- Name of staff person conducting the recording
- Type of document PINs of real property parcels affected, if any
- Unique transaction record number

B) Automating the maintenance of property tax records

A Land Records Modernization plan including the automation of the maintenance of property tax records must address how the unit of government will make progress toward the following:

- **Format Minimum Goal:** The digital format in which data resides must be compatible with or easily translatable to at least one major RDBMS software format.
- **Record to Parcel Relationship**

Minimum Goal: One record only will be maintained for each tax parcel.

- PIN as Unique Identifier Minimum Goal: All records will be identifiable via a unique PIN. All real property tax information will be accessible using the unique PIN. This could involve one to many database files, appropriately keyed
- **PIN Link to Legal Description**

Minimum Goal: A copy of each unique PIN will be maintained in a database file containing references to documents containing the full legal description of the tax parcel. This database file will also contain information on when the PIN was assigned and when it was retired if the configuration of the tax parcel has changed.

- **PIN History**

Minimum Goal: As tax parcels are grouped or divided the old PIN will be retired and new unique PINs will be created for all subsequent tax parcels. Historical records will retain tax information locatable using the old PIN.

C) Creating and maintaining a Geographic Information System (GIS) of cadastral data containing coordinate controlled digital maps of land parcel boundaries with unique identifiers linkable to automated property tax records and land transaction records. The GIS is the integrating technology to tie the land record transactions and property tax records to each other and to all other pertinent data maintained by the city or county. A Land Records Modernization plan including GIS must addresses at least the following issues:

■ **Contents**
Minimum Goal: Geodetic control, Public Land Survey System boundaries, land parcel boundaries with unique identifiers, public rights of way,
Desired Goal: All of the above with the addition of surface water, easements, and parcel identifiers that will enable the parcel base to be linked to property tax records.

■ **Coordinate Systems and Projections**
Minimum Goal: The use of a recognized standard projection and coordinate system that can be readily and accurately translated to the various other recognized standard projections and coordinate systems by the major GIS software packages.
Desired Goal: Minnesota County Coordinate system or Minnesota State Plane Coordinate System.

■ **Datum**
Minimum Goal: The use of a recognized standard datum that can be readily and accurately translated to the various other recognized standard datums by the major GIS software packages.
Desired Goal: North American Datum of 1983 (NAD83)

■ **Geodetic Control**
Minimum Goal: The use of a geodetic control system tied to Minnesota's High Accuracy Reference Network (HARN). The accuracy and density of the established geodetic control must be adequate to meet established accuracy standards for the parcel base map.
Desired Goal: The above plus the establishment of control coordinates for every Public Land Survey (PLS) section corner.

■ **Positional Accuracy of Parcel Boundaries**
Minimum Goal: Positional accuracy within plus or minus 40 feet.
Desired Goal: Positional accuracy within plus or minus 2 feet.

■ **Data Storage Precision**
Minimum Goal: Adequate to maintain stored coordinates to the nearest US Survey foot.
Desired Goal: Adequate to maintain stored coordinates to the nearest 1/100 of a foot.

■ **Data Layers**
Minimum Goal: The separation of spatial data into data layers by data type.
Desired Goal: Separate layers for control points, parcel boundaries, PLSS section lines, water features, etc.

■ **Data Set Naming Conventions**
Minimum Goal: A rational and consistently used naming convention that is adequate to avoid confusion about dataset identity and version.

■ **File Segmentation**
Minimum Goal: None
Desired Goal: Divide base map data by PLS township in rural areas and by PLS section in suburban areas, and PLS quarter section in urban areas.

■ **Parcel Identification Numbers (PINs)**
Minimum Goal: A unique numeric or alphanumeric identifier for each parcel or legally recorded

unit of land ownership. Parcel identification numbers (PINs) that are unique for each tax parcel which may itself consist of more than one legally recorded unit of land ownership. These must be or contain the same identifiers that are used for property ownership and taxation records.
Desired Goal: Follow the recommendations published by the Governor's Council on Geographic Information concerning parcel identification. In short, these include the use of whatever unique parcel identifier is currently in use for tax record purposes with the addition of the 3 digit county FIPS code at the left of the identifier. Each county or city would not need to make this addition, it would be done by those wishing to use parcel data from more than one county.

■ **Metadata**

Minimum Goal: Comply with the metadata guidelines published by the Governor's Council on Geographic Information.
Desired Goal: Use the Data Logger metadata software obtainable through LMIC.
This metadata must be transmitted with all datasets.

■ **Data Clearinghouse Listing**

Minimum Goal: All GIS datasets will be listed with the Minnesota geospatial data clearing house by transmission of a digital version of the metadata for the datasets to the clearing house.

Glossary

Cadastral data: Public record of the extent, value, and ownership of land. Cadastral data in a GIS dataset pertains to property lines and related data.

Coordinate Systems: Imaginary grids superimposed on the earth's surface that can be used to reference the exact or absolute location of a feature on the earth.

Projection: The mathematical process required to represent the spheroid surface of the earth on a flat map. Project determines how features on the map look and what kind of distortion will be present. Different projections are appropriate for representing large, medium, and small areas on the earth's surface. When mapping a relatively small area, like a county or city, less distortion is apparent on the flat map. The determination and use of a particular datum is part of the project selection process.

County FIPS code: A standard, unique 3 digit numeric code for each county in a state established by the Federal Government. The combination of FIPS codes for the state (two digit) and the county (3 digit) provides a unique identifier for every county in the USA.

Database: A collection of related data maintained in a computer readable electronic format. This collection will have a tabular form, that is, organized into rows and columns in which each column (also called a field or item) represents a kind of information and each row (also called a record) represents an instance of information. See 'tabular data' and 'GIS dataset'.

Data Layers: Geospatial data grouped by type. For instance, Right of Way, lot lines, easement lines, and shorelines serving as property lines could all be grouped into a layer called Parcels, this could be used together with a layer containing the boundaries of different soil types to perform an analysis or make a map of who owns how much of what kinds of soils.

Data Storage Precision: The degree to which the software can maintain the detail of a feature's location. The data may be maintained in either "single" or "double" precision.

Single precision can store a coordinate of seven digits without rounding. Thus, a point located at X=1,234,565 feet and Y=4,701,114 feet would remain precise through many processing operations down to the nearest foot. However, if any of the coordinate pairs were more than 7 digits long, rounding would occur and 1 foot of precision would be lost. Thus 44,701,114 would be rounded to 44,701,110. In this example, location in the GIS would be recorded precisely to the nearest 10 feet.

Double precision can handle 14 digits in a coordinate without rounding. This will prevent rounding error on very large coordinate pairs.

Datum: See “Projection”

Digital form: Data maintained in a computer readable electronic form.

File Segmentation: Large GIS datasets are often broken up into geographic regions or segments for ease and speed of processing and use.

Geodetic Control: Locating map features correctly in relation to their actual locations on the surface of the earth. Features on digital maps used in a GIS should represent, as faithfully as possible, the true geographic locations of places on the earth and the true spatial relationships between these places on the earth. One important way to aid this endeavor is to register key points in the digital map to the real world coordinates of those points on the ground. These real world coordinates should be in one or another of the recognized projections, units, and datums. The map is then said to be "in control." Doing this will greatly aid the internal consistency and accuracy of the digital map and support the use of this digital map with any others that are similarly “in control”.

This is not the same as having your base map tied to the Public Land Survey system (PLSS) of townships and sections. The PLSS is important in land ownership descriptions, but its section corners may or may not have geodetic control coordinates (coordinates representing a position on the earth in an established coordinate system) established for them.

Geodetically controlled GIS parcel base map: A parcel base map created and maintained in reference to a real world coordinate system and the known coordinates of certain points on the earth that are also represented on the map and to which other features on the map are referenced.

Geographic information system (GIS): "An organized collection of computer hardware, software, geographic data, and personnel designed to efficiently capture, store, update, manipulate, analyze, and display all forms of **geographically** referenced information."

Geospatial data: Data that pertains to a place on the earth. Geospatial data can be used with a GIS.

GIS datasets: Geospatial data collected into databases for use with a GIS. These data can have complex multi-file structures and so are called datasets rather than files.

Metadata: Data about data. This should at least include dataset names with descriptions of what they contain, coordinate system & datum, theoretical accuracy, source document names with dates & scales, data conversion methods, update history, lists of field names & what they contain, and keys to any codes used in these fields (for example: R1 = single family residence).

Parcel Identification Numbers (PINs): Numbers that are used to identify land parcels and link them to other information maintained about the parcels and their owners. It is most useful if they are unique to a particular parcel or taxable land entity.

Positional Accuracy: The degree to which map features are shown in the correct position on the map in relation to their real locations on the earth.

Public Land Survey System (PLSS): The survey system used in the original land survey conducted by the U.S. Government in order to transfer title of federally owned land. Its major divisions are townships, ranges, sections, government lots and divisions of sections. The PLSS is important in land ownership descriptions, but its section corners may or may not have geodetic control coordinates (coordinates representing a position on the earth in an established coordinate system) established for them.

RDBMS: Relational Database Management System. Modern database and GIS systems make use of relational database technology and standards. Examples of RDBMSs include; Oracle, dBase, Access, Foxpro, INFO, Sybase, Informix, DB2, Paradox, etc

Executive Summary: Minnesota Land Records Modernization Program

The Issue: We Depend on Land Information. Many of the most important functions of Minnesota's governments — cities, townships, counties, and state — concern land. The functions include:

- Providing systems and procedures that document ownership of real property, minimize costs for insuring ownership claims, and ensure fair, uniform, and equitable taxation throughout the state.
- Providing basic infrastructure effectively, efficiently, equitably, and in a timely manner.
- Providing property and people with effective and timely essential services, including police, fire, and emergency response.
- Ensuring that development occurs consistently with the public's interest in preserving property values, providing access to housing and employment, and protecting the environment.
- Managing public lands effectively, efficiently, and in the public's interest.

Quality information about land, the legal rights associated with it, and how land is used is essential if Minnesota's governments are to perform these functions well.

The Problem: Better Technology is Needed Modern land information systems use technology to collect, store, retrieve and map the information needed by Minnesota's governments to support their day-to-day operations and policy decisions. While public investments have been made in such systems, their cost and technical complexity overwhelm many local governments. Where effective local systems exist, they often cannot be used for important regional and state issues that extend beyond local boundaries unless similar systems exist in surrounding jurisdictions and data are effectively shared.

Our Solution: A Statewide Program Meeting Local Needs The Minnesota Land Records Modernization program offers a solution to this problem. It provides the resources and direction needed to modernize local land information systems while also enhancing our ability to address regional and state issues related to land and resource management, comprehensive planning, service delivery, and government operations.

The program seeks to achieve the following goals.

1. **Enhance Local Capacity.** Provide assistance to help local governments plan and implement effective and efficient systems that meet their land information needs.

- Funding to support local implementation of systems throughout the state, provided from an adequate and appropriate source.
- Technical assistance to help local governments design, develop, implement and manage effective, integrated land information systems.

2. **Facilitate Data Integration.** Develop and promote guidelines and standards that facilitate data integration that meets local, regional and state needs.

- Integration of local land information with other local data.
- Integration of land information across jurisdictional boundaries to address regional and state issues.

3. **Provide Equitable Access.** Enhance the value of land information to units of government, the private sector and the public by documenting it and making it readily available.

LAND RECORDS MODERNIZATION FEASIBILITY STUDY PROJECT

Draft of August 17, 1998

Year 1:

1. Review past studies and existing materials related to County based land records systems and processes.

2.Determine and document the current practices and tools in place within the 87 counties for land records administration including but not limited to property taxes, land ownership, planning and zoning, land use, soil types, permitting, roads, utilities, etc. This would include identifying both automated and manual processes.

3. Develop a logical model of a comprehensive parcel based land records program which integrates the suggested components together. This is not building a single computer system and/or data base, but integrating new and existing systems together recognizing that the systems counties use vary between counties.

4. Identify ways that counties can integrate their land records data and process together as well as with cities, the State and other governmental entities where needed and appropriate.

5. Identify the activities, processes and systems that counties should integrate together to develop a modernized (automated) parcel based land records environment. Identify what should be the "core components" and the sequence, if any, that they should be implemented. Also identify the resources needed for this implementation effort.

6. Identify areas where standards, if any, should be imposed and areas where "best practices" should be followed.

7. Identify the benefits, if any, for Minnesota government and the public for implementing a statewide program of parcel based land records modernization in the counties.

8. Write, edit and publish a report of findings to be widely distributed including to the legislature. This report should describe the proposed modernized land records model, its costs to implement, and anticipated benefits to Minnesota Government and its citizens.

9. Conduct 10 to 15 meetings around the state to present and discuss the study's findings. At these meeting also discuss the pilot project phase of this effort.

10. Work with a technical and advisory committee during this phase of the project. (Anticipate 10 to 15 people on the committee and meeting once each month.

Year 2:

Identify 4 to 7 counties to participate in pilot projects that would implement portions of the proposed land records modernization integration to evaluate and refine the logical model. (May start this effort at the end of year one.)

Select the counties to participate in the piolet projects to validate the proposed model based on their grant applications and ensuring desired demographic distribution. Participating counties should match the State funds with county resources and agree to sustain the implemented systems and/or integration after the project is completed. The counties should represent both metro and out state, large and small, as well as include counties that currently automated systems as well as manual process. Integrating data (systems) between adjacent counties should also be part of the pilot projects. Cooperative efforts of counties with other counties, cities, and other Minnesota governmental entities should be taken into consideration.

Review the pilot projects to determine their ability to implement portions of the model. Update the land records model to reflect the findings of the pilot counties.

Update the identified implementation costs and benefits.

Develop a report to the legislature of recommendations for a statewide program for parcel based land records modernization in all of the counties including its benefits and costs.

Present the report and findings to the legislature and interested groups. (Anticipate 10 to 15 presentations across the state.)

Funding needs:

1. One full time professional for full two years.
2. One half time clerical for full two years.
3. Office space, furniture, supplies, overhead, etc. for the above two staff.
4. Two consultants for approximately eight to ten month during the first year.
5. Travel expenses for the consultants and staff during the first year.
6. Travel and related expenses for the “advisory committee” for the first year.
7. Editing, printing and distribution of two reports (one each year).
8. Fifty to One-hundred thousand dollars for each of the pilot counties in the form of grants with to up to seven pilot project counties.
9. Development of three to four presentations including handouts.