

Illinois Geographic Information Systems (GIS) Strategic Plan

Draft 6.0



ILLINOIS GIS STATEWIDE STRATEGIC PLANNING COMMITTEE

The Illinois Statewide GIS Initiative will provide GIS leadership, coordination and services to public and private entities that serve the citizens of Illinois.

June 2008

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This effort was funded in part by a 2007 National Spatial Data Infrastructure (NSDI) Federal Geographic Data Committee Cooperative Agreement Program (CAP) grant to “Develop a Strategic Plan for GIS in Illinois.” The Illinois Geographic Information Council (ILGIC) initiated the NSDI grant proposal and coordinated project activities throughout plan development. For more information contact ILGIC at (217) 785-8586, Email: sheryl.oliver@illinois.gov.

EXECUTIVE SUMMARY

Geographic Information Systems (GIS) technology allows municipalities, counties, state agencies and private entities to manage location based information in its most natural way – spatially using digital maps. Illinois government agencies are heavy users of this technology, using to manage underground utilities, infrastructure maintenance, inspections and permitting, dispatch for 311 and 911, parcel and property management, environmental analysis, flood plain management, and emergency response.

While each new use of GIS quickly demonstrates its value to Illinois citizens, few initiatives are coordinated across agencies or jurisdictions. The inherent return on investment could be leveraged even further through coordination of these initiatives across jurisdictions in Illinois. Central coordination could accomplish the following:

- 🌐 Enable real-time access to current, quality data for use by all jurisdictions
- 🌐 Streamline development of quality data by eliminating redundant activities
- 🌐 Enhance capabilities of smaller jurisdictions by providing hosting and other shared services
- 🌐 Faster response to emergencies with current and complete data
- 🌐 Broad statewide analysis to anticipate future needs and initiatives

Case studies have illustrated that states with a coordinated GIS approach can save millions of dollars annually, by centralizing services for data development, maintenance and procurement; application building, and even license management. Moreover, successful coordination is enhanced when there is a viable coordinating council of stakeholders that provides strategic direction and oversight.

Today, Illinois is poised to provide leadership and guidance to enhance the use of GIS across all levels of government. Statewide GIS stakeholders support the formation of a central leadership entity with oversight from a cross-jurisdictional board.

Funded by a grant by the Federal Geographic Data Committee’s “Fifty States Initiative”, the IL GIS Strategic Planning Committee developed this plan to define the stakeholder’s vision for establishing a central GIS agency. A more detailed Business Plan will define the detailed implementation steps.

THE MISSION

The Illinois Statewide GIS Initiative will provide GIS leadership, coordination and services to public and private entities that serve the citizens of Illinois.

STRATEGIC ISSUES

The Strategic Planning Committee identified four strategic issues that must be addressed to establish central leadership in GIS. Goals and tactics to address each issue are defined in the following chapters. A summary of the issues is provided below.

GOVERNANCE *What governance mechanisms are important in building Illinois' Spatial Data Infrastructure (SDI)?*

An overall structure of an oversight body (ILGIC) that sets priorities and standards supported by a tactical agency that implements the GIS initiatives is envisioned. Champions from all levels of government will be needed to establish this structure. The appointment of an Illinois GIO (Geographical Information Officer) will provide a focal point for coordination between the two units and with stakeholders throughout the state.

FUNDING *What funding mechanisms are needed to operate ongoing and future Spatial Data Infrastructure (SDI) initiatives that address critical business needs?*

Achieving long term goals depends on establishing a sustainable funding source. The primary source should be the State of Illinois budget. Reorganization of existing GIS personnel can make this a flat adjustment initially. Further sources through subscriptions, services, and grants will be explored in the Business Plan. All funding will be allocated based on project priorities identified by the oversight council.

DATA & SERVICES *How can we create and distribute quality GIS data and services that knows no jurisdictional boundaries within the State of Illinois?*

GIS technology is data centric. To ensure that decisions are made on the best information available, standards for data quality and sharing need to be established. Services to facilitate access to this data include database tools, websites, geocoding services, and common web services.

COMMUNICATION & OUTREACH *How can we inform the public and policymakers in the State of Illinois about the strategic benefit of GIS technologies, and promote technical and non-technical education related to those technologies?*

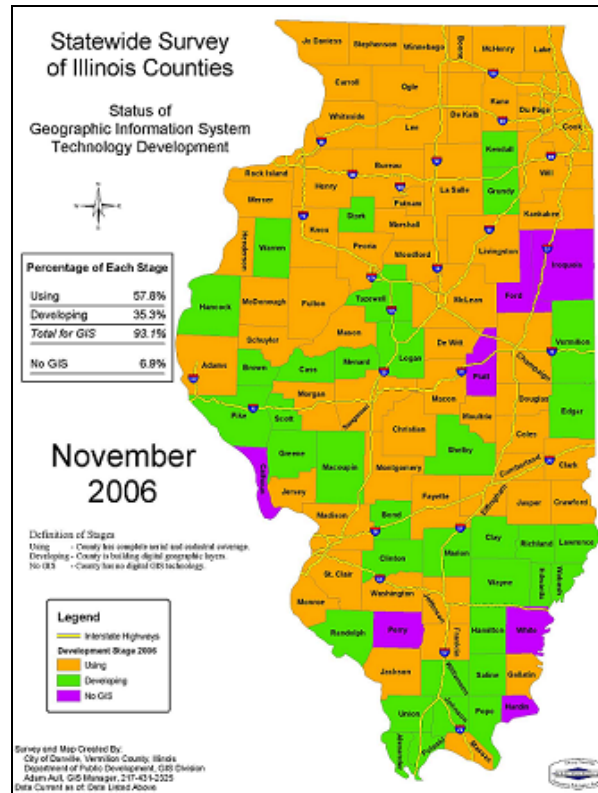
In order to build the support needed to have this strategic plan accepted by the State of Illinois, educational and marketing efforts need to increase the awareness of GIS and how it can provide value in Illinois.

BACKGROUND

BRIEF HISTORY OF GIS ACTIVITIES IN ILLINOIS

Geographical Information Systems (GIS) use in Illinois has grown organically “from the ground up” in Illinois since its introduction over 25 years ago. Legislation forming the Illinois Geographic Information Council (ILGIC) was passed in July 1995. It was one of the first states in the nation with a legislated council.

The Illinois Geospatial Data Clearinghouse, hosted and maintained by the Illinois State Geological Survey, has been one of the most enduring GIS activities in the state. The Clearinghouse is a gateway to Illinois GIS data sets and is well known for hosting ortho-imagery, historical aerial photography, and interactive map services (<http://www.isgs.uiuc.edu/nsdihome>).



Illinois also has a very vibrant user community organization. The Illinois GIS Association (ILGISA), founded in 1994, established an independent voice for the diverse and ever-growing community of GIS users in the state. It has sponsored a fall and spring conference since 1995 (www.ilgisa.org).

CURRENT GIS TRENDS

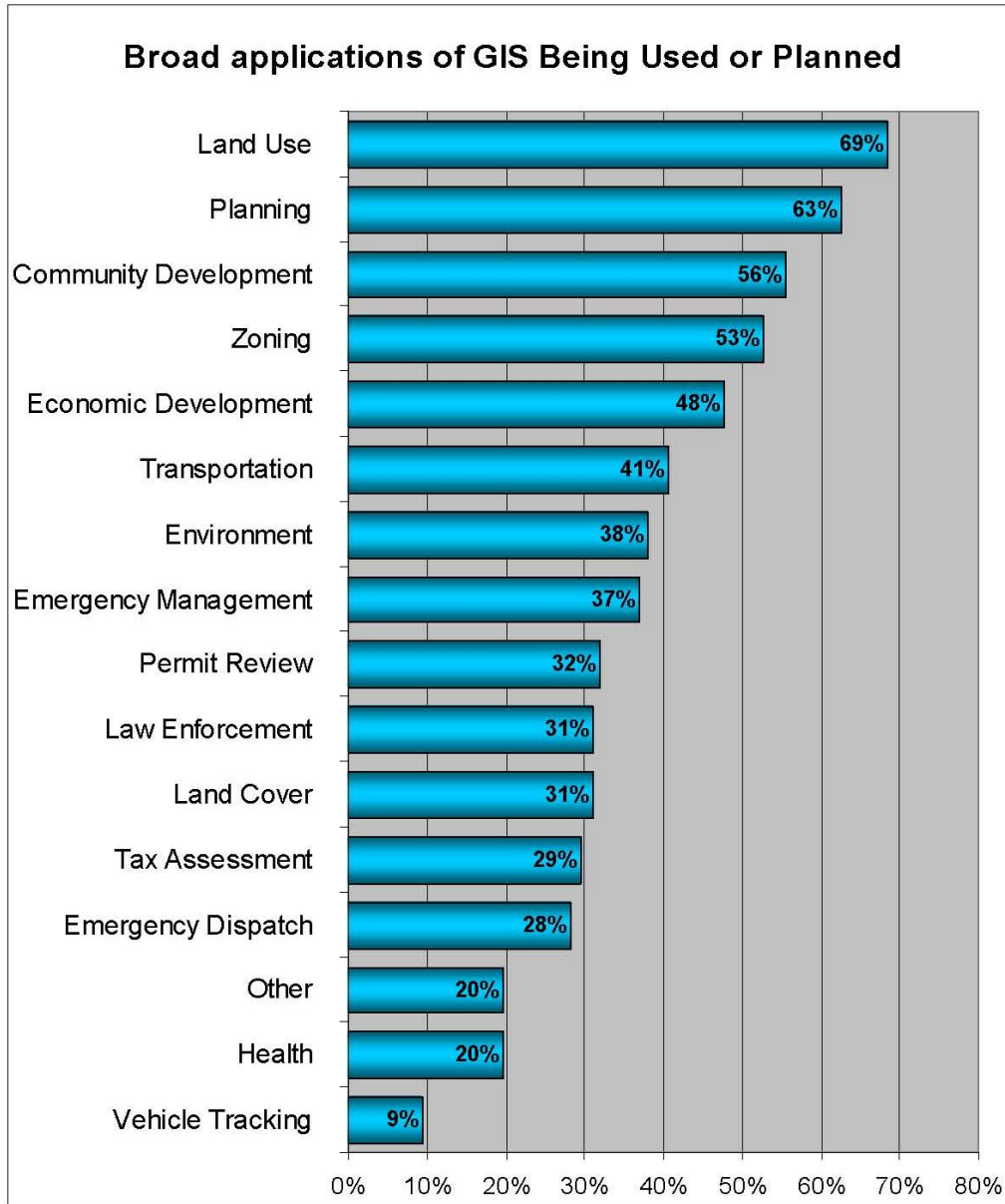
Current business forces are driving an increasing number of organizations to look toward GIS technology for solutions. GIS has become a familiar tool – supporting online driving directions, images from satellites, and basic interactive maps on the web. These consumer applications are only a small taste of the potential uses of this technology.

Illinois, like many states, is grappling with ever increasing needs and demands to provide:

- Competitive Business and Residential areas
- Day to day emergency response
- Health and social services for children, the aged, and the poor
- Management of natural disasters

- Maintenance of infrastructure
- Protection from and prevention of hazards and pandemic s

Strategic use of GIS technology can support the management, planning, and decision making of the needs above, along with many other applications. Eighty-percent (80%) of all government information has a geographic component and is amenable to the use of GIS.



2008 ISGS Survey of the Status of Public Sector Geographic Information Systems in Illinois

Today in Illinois, municipalities use GIS to maintain infrastructure, manage field crews, and create new city plans. Counties use GIS to track parcels and taxable units, track disease outbreaks, and support first responders. State agencies use GIS to manage natural resources, maintain highway networks, and support disaster planning.

STRATEGIC PLANNING APPROACH

The **Illinois GIS Advisory Committee** (*GISAC – See Appendix C*) applied for and received a CAP grant related to the *Fifty States Initiative* in early 2007. The Northern Illinois University (NIU), Center for Governmental Studies was engaged to facilitate upcoming meetings, document meetings, post material, and assist with the GIS strategic and business plans. The advisory committee established a larger Strategic Planning Committee, through statewide nominations, in August 2007.

The Strategic Planning Committee attended three planning workshops, met as small groups on various topics, developed a draft of this strategic plan, and conducted listening sessions throughout the state to obtain feedback. Details on the workshop approach are available in Appendix A, and in a supplemental appendix document.

A companion document to this Strategic Plan is the “*Status of Public Sector Geographic Information Systems in Illinois.*” (Appendix E) This study was made possible through a 2007 State Assistance Grant from the United States Geological Survey. This grant was used to conduct a first-time, professional survey with the primary objective of collecting information regarding the status of GIS in various levels of government and non-profit organizations across the entire state. Included within this report are maps showing the responses in a geographic context and separate conclusions can be found on page 32 of the study.

Governance

What governance mechanisms are important in building Illinois' Spatial Data infrastructure (SDI)?

GIS technology provides the ability to enhance decision making, integrate disparate data, and streamline workflows, and reduce overall costs at all levels of government. This powerful potential cannot be realized without a central coordinating body to guide policies and standards, and a tactical team to implement GIS technology statewide.

While Illinois has a very active *GIS Community* throughout state, county, and local government, the designated coordinating body, ILGIC, has been inactive for many years. Illinois is without either a GIS Coordinator or designated GIS department.

The Illinois GIS Strategic Planning Committee composed of a cross section of governments throughout the state, spent time defining and analyzing Illinois GIS concerns. Achievement of the goals that follow will make Illinois a leader in GIS Coordination.

GOAL #1 – OVERSIGHT BODY

Establish a viable and sustainable coordination/oversight body that provides direction and leadership in the efficient development, use and maintenance of geographic information and associated processes and procedures.

Objective	Achievement Steps	Timeframe
A) Define the Scope of Services of the Illinois Geographic Information Council (ILGIC- P.A. 94-0961).	<ul style="list-style-type: none"> Define the overall vision for GIS in Illinois. Define overall roles and responsibilities. Define requirements for Annual Reports to Governor's office, General Assembly, and statewide stakeholders. Define contracting and grant administration authority. Define role in establishing data sharing and technical standards. 	2009
B) Develop a new model for broad-based representation on the Council.	<ul style="list-style-type: none"> Define the structure of council seats to provide representation for state government, county government, municipal government, educational institutions, and the private sector. Ensure standing seats for the state level Geographic Information Officer (GIO) and the Chief Information Officer (CIO). Define the method of appointment and length of terms for all seats. Define standing committees for key topics, such as 	2009

Objective	Achievement Steps	Timeframe
	financials, standards, and project oversight.	
C) Establish Executive & Legislature support for the reconstructed Illinois Geographic Information Council (ILGIC- P.A. 94-0961).	<ul style="list-style-type: none"> Evaluate whether recommended changes can be accomplished with an executive order, or if amended legislation is necessary. Lobby and educate key influence leaders in the legislature and governor's office. Identify and obtain agreement for a supporting administrative organization. 	2009-2011

GOAL #2 - LEADERSHIP

Provide leadership throughout the state of Illinois on strategic priorities for GIS that will enhance the quality of services and opportunities for Illinois residents.

Objective	Achievement Steps	Timeframe
A) Identify an executive champion that will assist in the promotion of this effort in the State of Illinois.	<ul style="list-style-type: none"> All stakeholders should actively seek-out GIS champion(s) through all forms of communications (meetings, presentations, emails, phone calls). Develop a relationship with the State CIO and leadership within Central Management Services (CMS), Department of Natural Resources (DNR), Illinois Department of Transportation (IDOT), and Emergency Management. Identify relevant committees and legislators that could understand and promote the GIS initiative. Identify Local Government officials that can be champions from the County and Municipality perspectives. 	2009-2010
B) Establish an Executive Committee to drive the achievement of key objectives.	<ul style="list-style-type: none"> Form an interim group that will drive planning and implementation prior to establishment of formal council. Solicit donations from stakeholder for infrastructure and administrative support during interim period. Define schedule of interim reports to be made to all stakeholders. 	2009-2010
C) Develop a Communications Plan to increase awareness of the GIS Council initiative and its benefits.	<ul style="list-style-type: none"> Define targets for communications and anticipated benefits from support. Develop and distribute public relations materials to involve all levels of government in the status and ongoing activities associated with the Strategic Planning Process and Business Planning Process and ongoing GIS activities. 	2009

Objective	Achievement Steps	Timeframe
	<ul style="list-style-type: none"> • Develop a “road show” executive presentation that demonstrates the power of GIS and articulates the business case for greater statewide coordination. Present this throughout the state at association meetings, state agencies, counties, municipalities, and conferences. • Launch an information portal for the marketing initiative that incorporates some GIS showcase technology. • Explore hiring a professional lobbying or promotions firm. • Enlist GIS Practitioners to assist in the communications effort with message and access to their organizations. 	
D) Draft a detailed Business Plan that identifies key priorities related to GIS that can directly impact productivity and effectiveness throughout the state.	<ul style="list-style-type: none"> • Formalize issues identified during workshops into a “draft” strategic priorities document. • Conduct “<i>listening sessions</i>” throughout the state and stakeholder levels to obtain feedback and identify new opportunities. • Develop a detailed business plan that targets how the GIS initiative can address critical priorities within the state in general. 	2008 - 2009

GOAL #3 – GIS IMPLEMENTATION UNIT

Establish a sustainable GIS division (unit, entity) to implement and support GIS initiatives for the state of Illinois that also supports activities that can be leveraged by all levels of government (local, county and state).

Objective	Achievement Steps	Timeframe
A) Define a formal Business Plan for the GIS Division that addresses funding, staffing, ongoing costs, and return on investment.	<ul style="list-style-type: none"> • Evaluate and select the most viable organization model. Consider non-profit, state agency, consortium models. • Identify staffing and technology infrastructure needs, with a five year plan for buildup. • Based on selected organizational model, define a revenue model that considers multiple sources, yet guarantees a minimum sustained source. • Define cost model and review options for shared costs, offsets, and services in kind from stakeholders. 	2009
B) Identify the scope of services of the GIS Division.	<ul style="list-style-type: none"> • Define scope of services related to data stewardship, data inventory management, application development, hosting, analysis, and other potential services. 	2009

Objective	Achievement Steps	Timeframe
	<ul style="list-style-type: none"> Define the relationship between ILGIC and this GIS Division. 	
C) Identify sustainable funding source and physical location of GIS division.	<ul style="list-style-type: none"> Review funding models of similar structures in Illinois and other states. Analyze potential sources of ongoing funding that would sustain day-to-day operations of the GIS Division. Identify supplemental sources of funding that would support special initiatives and projects. 	2010
D) Staff and equip the new GIS Division.	<ul style="list-style-type: none"> Obtain staff through hiring, transfers, and outsourcing. Implement logistics of physical space, support, and infrastructure. Implement reporting and management structure. 	2011

GOAL #4 – ILLINOIS GIO

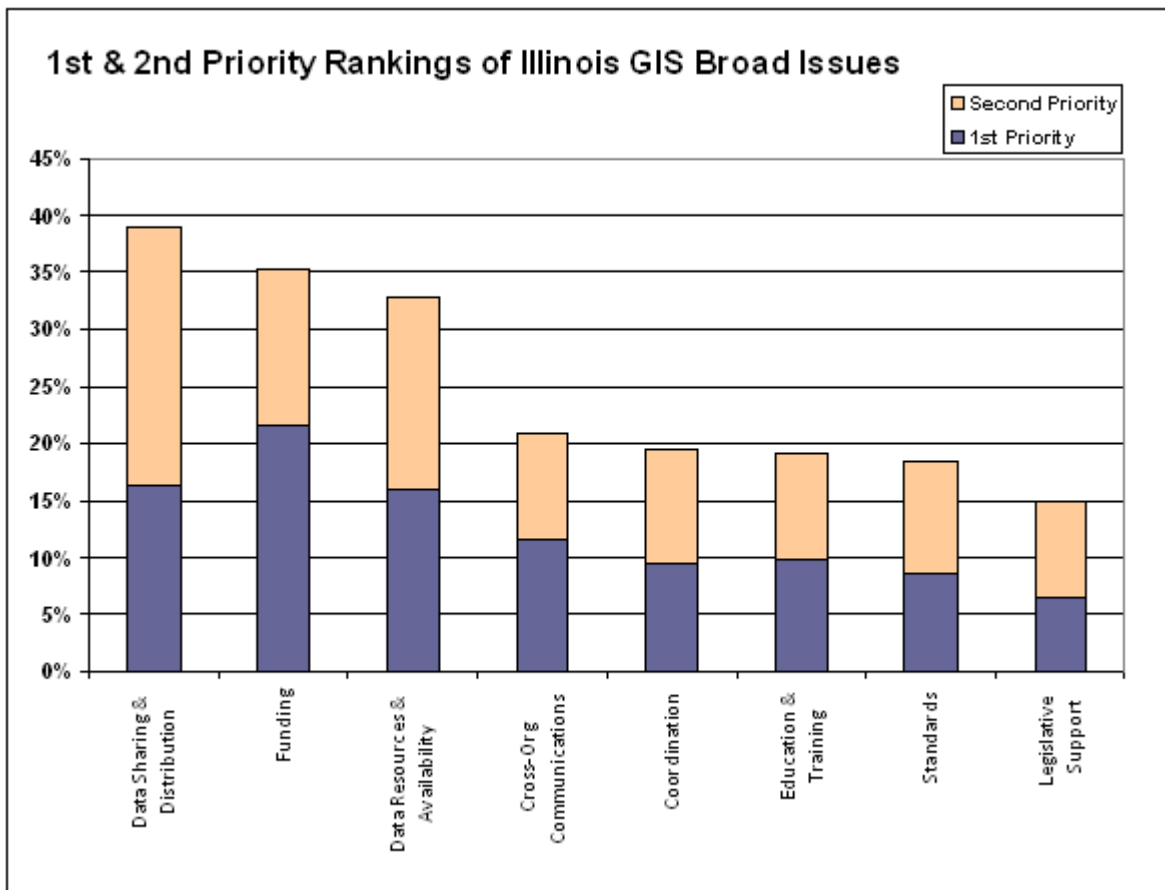
Appoint a state GIO working under the state CIO in the Governor’s office.

Objective	Achievement Steps	Timeframe
A) Define Business Case for a GIO position.	<ul style="list-style-type: none"> Identify skill requirements and job responsibilities. Define estimated salary and costs of new position. Define benefits to the state of filling this position. 	2009
B) Establish position for inclusion in State Budget.	<ul style="list-style-type: none"> Obtain support from the Governor’s office and General Assembly for new position. Work with the Governor’s office and Illinois CIO to establish the position within the 2010 budget. 	2010
C) Select and hire GIO.	<ul style="list-style-type: none"> Designate ILGIC to develop and recommend short list of Candidates for selection. Interview candidates. Present short list to Illinois CIO for further interviews. 	2011

FUNDING

What funding mechanisms are needed to operate ongoing and future Spatial Data Infrastructure (SDI) initiatives that address critical business needs?

There is a critical need to establish funding mechanisms to support both existing programs and new initiatives that address critical business needs. The lack of sustainable funding has been a significant impediment to improved GIS program coordination in Illinois. Funding ranked as the first or second priority among most of the GIS survey participants.



2008 ISGS Survey of the Status of Public Sector Geographic Information Systems in Illinois

There were several GIS funding issues that were addressed in the “*Status of Public Sector Geographic Information Systems in Illinois.*” (Appendix E) conducted and analyzed in 2008. Topics included: *Fees for Data, Funding of Standards Implementation, and How is GIS Funded?*

Sustained and adequate funding will provide a more consistent delivery of vital services throughout the State of Illinois. Funding will facilitate better planning and integration with federal funding programs and initiatives. The following benefits are expected:

- Enable long-term planning concerning data initiatives for the entire State of Illinois.

- Achieve high quality mapping data on a faster, predictable basis.
- Creation of a GIS portal with expansion of the Illinois Geospatial Data Clearinghouse
- Access to geospatial resources for smaller jurisdictions that currently operate without GIS technology.
- Real-time access to high-quality geographic information, technology, and services to support critical business needs with coordinated decision making.
- Reduced overall costs of data maintenance through the consolidation of redundant processes and acquisitions.

Establishing a sustainable level of funding will eliminate a critical barrier to improved coordination, development, use, and maintenance of geospatial resources and services throughout the State of Illinois.

GOAL #1 - OBTAIN SUSTAINABLE FUNDING SOURCES

For many years, the GIS community in the state has voluntarily collaborated to fund the development of specific initiatives including:

- The acquisition of statewide aerial photography
- The acquisition of a statewide license for commercial base data
- Development of a data clearinghouse website

Funding has been provided from a wide variety of sources including all levels of government (federal, state, county, municipal) as well as the private sector, utilities, universities and more. However the strategic importance of GIS to the State of Illinois requires that a predictable, sustainable funding source be established. This will allow investment in long-term technology strategies, and improve both the quality and currency of GIS products. GIS has the potential to become a vital strategic tool, but only if it is recognized as such, and not as just a niche application.

Objective	Achievement Steps	Timeframe
A) Define a Business Plan that determines the level of funding needed and establishes an initial budget.	<ul style="list-style-type: none"> • Based on Scope of Services of both ILGIC and a central GIS Division, itemize anticipated operational costs over the first 5 years related to facilities, staff, technology, support and general operations. • Define a variety of scenarios for both a non-profit and a state-sponsored organizational model. • Review costs of outsourced GIS technology infrastructure. • Present findings and gather feedback from all of the various stakeholders. 	2009

Objective	Achievement Steps	Timeframe
<p>B) Evaluate funding models appropriate to Illinois</p>	<ul style="list-style-type: none"> • Identify existing GIS costs in the State budget across all state agencies. Document staffing levels, infrastructure, licensing costs, and consulting costs. Review if and where partial consolidation would provide gains over the current structure. • Conduct a statewide survey to document the level of infrastructure, capabilities, and funding at municipal, county, and state organizations. Survey should also test interest in potential subscription services. • Review funding models of quasi-state organizations, such as the Chicago Metropolitan Agency for Planning (CMAP). • Review funding models of cross-jurisdiction GIS Consortiums in Illinois. • Review best practice models from other states. • Develop Financial Model Recommendations. 	<p>2009</p>
<p>C) Maximize the use of alternative and creative funding sources such as grants and shared resources</p>	<ul style="list-style-type: none"> • Review membership and subscription services as potential revenue sources. • Review private partnership opportunities for revenue or bartering. • Develop a realistic estimate of specific grant mechanisms and federal match programs. Estimate potential revenues over five years. • Explore potential contributions of “services in kind” from larger government organizations in the state to help support initial startup. • Develop models for data sharing, server sharing, and services sharing agreements. 	<p>2009-2010</p>
<p>D) Identify focused initiatives that will encourage funding and build momentum.</p>	<ul style="list-style-type: none"> • Identify key operational concerns or goals of both state and local government stakeholders that could benefit from GIS technology. • Create small work group to evaluate the return on investment and potential benefits from proposed initiatives. • Identify sources of funding and resources for selected projects. Obtain commitments for both. • Develop statement of work, project charter, and project award for selected initiatives 	<p>2010</p>

GOAL #2 - PRIORITIZE PROJECT FUNDING

Strategic priorities will guide the allocation of funds to initiatives. Anticipated criteria would include the following:

- Will the project benefit multiple entities in the state?
- Will the outputs be made freely available?
- Will the project assist in leveling the disparity of GIS resources in small jurisdictions?
- Will the project support situational awareness and emergency response?
- Will the project influence decision making in economic development?

Efficient, no-cost access to geographic data (maps and imagery, for example) has been a strong, positive influence on economic development in many areas. County and municipal organizations have a growing need to implement and provide GIS services to their constituents including staff members and the citizens residing in those areas.

Differences in how and whether various governmental organizations charge for GIS data and services has resulted in an impediment to quality, governmental GIS data. This could negatively impact future emergency response scenarios and economic development opportunities.

Funding of geospatial data development efforts should result in a situation where agencies are willing to make their data available at no-cost and without restriction. As a result, data will become more widely available, thus increasing its value and use within the stakeholder community.

Objective	Achievement Steps	Timeframe
A) Develop a mechanism to identify priority projects that support the goals and vision of this Strategic Plan.	<ul style="list-style-type: none"> • Define a process and tool set to receive, track, rank, and communicate proposed initiatives. (Likely an internet portal) • Propose and obtain ILGIC board approval for a set of criteria for measuring the value of a proposal. Revisit these criteria on an annual basis. Publish the criteria. • Define a program of “seed money” grants for groups proposing an initiative that they would implement directly. • Recommend the method of fund allocation for priority projects. 	2009-2011
B) Define Policies and Prerequisites for participating in funded initiatives.	<ul style="list-style-type: none"> • Develop standard policies for the data sharing and data sales in the state of Illinois. While the central organization cannot impose its policy on local entities, it can make compliance a prerequisite to participation in initiatives and shared services. • Establish a project governance process. 	2009-2010
C) Ensure that all expenditures of public	<ul style="list-style-type: none"> • Document a Return on Investment model for prioritizing and measuring initiatives. 	2009-2011

Objective	Achievement Steps	Timeframe
funds supporting GIS activities demonstrate measurable outcomes.	<ul style="list-style-type: none"> Apply the ROI model to past initiatives to assist in demonstrating the potential value. Collect ROI best practice examples from throughout the state. 	

GOAL #3 – ESTABLISH ACCOUNTABILITY MEASURES FOR ALLOCATED FUNDS

As stewards of public funds, it is always necessary to employ standard accounting practices and separation of duties. A financial committee would audit and oversee spending by the GIS Division. Due to the cross-jurisdiction constituency, transparency and regular reporting is an important method for building collaboration.

Objective	Achievement Steps	Timeframe
A) Establish a committee of stakeholders who will oversee allocated funds	<ul style="list-style-type: none"> Define the scope of activities for the financial committee. Identify method of assignment to financial committee, and any specialized credentials required. 	2010
B) Prepare and distribute an annual financial report/summary concerning this goal	<ul style="list-style-type: none"> Establish an outsourced resource for professional record keeping and accounting. Publish annual report on both financials and accomplishments. 	2010

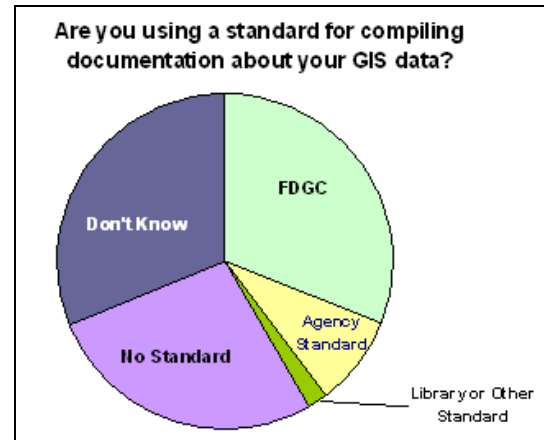
DATA & SERVICES

How can we create and distribute quality GIS data and services that knows no jurisdictional boundaries within the State of Illinois?

GOAL #1 – ESTABLISH DATA STANDARDS

Currently each jurisdiction sets data standards for its purposes without regard to coordination with other jurisdictions, or even other departments in the same jurisdiction. To use data from multiple sources the data must be converted to standard formats, aligned, and often verified.

Standards will provide a more predictable and consistent environment and improve data quality overall.



2008 ISGS Survey of the Status of Public Sector Geographic Information Systems in Illinois

Included within the “*Status of Public Sector Geographic Information Systems in Illinois*,” (Appendix E) are the results to questions such as: Standards, Funding of Standards Implementation, Who Should be Responsible for Standards?, Fees for Data, GIS Data Access Restrictions, Provide Data, and Public Access Issues and Statutes in Illinois.

Objective	Achievement Steps	Timeframe
A) Establish Standards Task Force	<ul style="list-style-type: none"> Form a volunteer group to determine priorities, content, and current inconsistencies. Task the group with developing an initial draft of statewide standards. Require bi-monthly status reports from the task force to the overall strategic planning committee. 	2008
B) Review Existing Standards	<ul style="list-style-type: none"> Review federally established data standards. Review standards from similarly sized states. Document different needs at municipal, county, state, and utility levels. Survey stakeholders to identify existing standards and discrepancies. 	2008
C) Propose a set of comprehensive data standards for Illinois	<ul style="list-style-type: none"> Establish minimum level of standards that should be applied to any data stored in the clearinghouse. Establish projection and precision standards at state, county, and municipal zoom levels. 	2009

Objective	Achievement Steps	Timeframe
	<ul style="list-style-type: none"> Identify standards that have a direct impact on data quality and productivity. Identify aerial, raster, and data exchange standards. Identify metadata standards and recommended toolsets. Finalize and circulate the draft standards with stakeholders. 	
D) Promote adoption of standards by State of Illinois	<ul style="list-style-type: none"> Present standards to ILGIC for comment. Request executive order sponsored by ILGIC to adopt the standards. 	2009

GOAL #2 – QUALITY DATA

Data Quality addresses the accuracy, consistency, timeliness, and reliability of information. Geographic Information Systems are data intensive applications that shine a spotlight on data quality issues. Collaboration between cities, counties, and state agencies will grow and provide value only when the data is of the highest quality.

Objective	Achievement Steps	Timeframe
A) Prioritize Base Data for Illinois Stakeholders	<ul style="list-style-type: none"> Inventory common data sets used at state, county, and local levels. Identify current state of common data sets related to availability, quality, and standards compliance. Inventory the data currently housed in the IL Data Clearinghouse. Prioritize layers targeted for collaboration and central access. Survey stakeholders regarding data needs and priorities. 	2009
B) Define Data Ownership	<ul style="list-style-type: none"> Identify the originating source of each priority data set. Establish Service Level Standards for maintaining, documenting, and sharing the data. Draft standard data sharing agreements to be used between ILGIC and source jurisdictions. 	2009
C) Define Quality Measurement Levels	<ul style="list-style-type: none"> Using recommended data standards, develop a scale of certification that scores the quality of data. Scores should be visibly available on the central data clearinghouse. 	2009
D) Review GIS Data Marketplace	<ul style="list-style-type: none"> Identify commercial sources for core base data. Identify potential private/public data partnerships. 	2009 - 2010

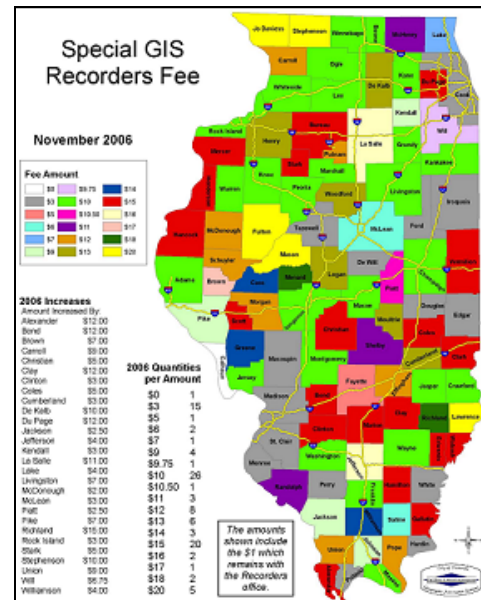
Objective	Achievement Steps	Timeframe
	<ul style="list-style-type: none"> Obtain feedback from stakeholders on commercial data priorities. Establish a mechanism to subscribe to, and share subscription to, commercial data. 	
E) Sponsor data acquisition and improvement projects	<ul style="list-style-type: none"> Define and implement a project to align the boundaries of priority data from adjacent jurisdictions. Potential data include local roads, municipal and county boundaries, and cadastral bases. Target grants for data development projects that will fill gaps in priority layers. 	2010 - 2012

GOAL #3 – ACCESS TO DATA

Easy, free, and open access to quality data will improve the productivity and decision making of stakeholders throughout Illinois. Too often, jurisdictions engage in scavenger hunts to obtain relevant data from another jurisdiction.

Data sharing and distribution ranked as a first or second priority among GIS survey participants.

A larger version of this map is available in the appendices.



Objective	Achievement Steps	Timeframe
A) Identify short-term approaches to making GIS data better available to statewide users.	<ul style="list-style-type: none"> Establish a volunteer task force to review alternatives and make recommendations for short-term, cost-effective data exchange. Alternatives include expanding the IL State Geological Survey clearinghouse, making use of the NSGIC Inventory website, or even establishing links on the ILGISCentral portal website. Inventory any Illinois regional clearinghouses available. Meet with ISGS to understand capabilities, platform, 	2009

Objective	Achievement Steps	Timeframe
	<p>structure, existing procedures, and existing technical resources related to the Natural Resources Clearinghouse.</p> <ul style="list-style-type: none"> • Determine whether any plans are already in place to expand or change or create inventories and clearinghouses in Illinois. • Develop a plan to document existing data. • Create an easy method to allow data owners to document and upload or link to data. • Solicit resources for any minor technical development necessary. (Look for pro-bono where possible) 	
<p>B) Design a long-term strategy for a central warehouse and data exchange mechanism for IL</p>	<ul style="list-style-type: none"> • Identify infrastructure, software and database platform requirements. • Identify methods for both physical data housing and virtual data redirects. • Identify data exchange formats and translators. • Define application support needed to support data exchanges. • Define technology skills for both development and ongoing maintenance. • Draft RFP language for clearinghouse development and potential outsourcing. 	<p>2009 – 2011 aggressively, then continuous</p>
<p>C) Establish a statewide policy related to data sales</p>	<ul style="list-style-type: none"> • Review legal validity of GIS Data Sales, including the Attorney General’s assessment. • Interview other states that have successfully migrated local governments from fee to free structures. • Assess the cost of selling data versus free availability. • Interview current “selling” jurisdictions to understand their motivations and pressures. • Propose a strategy to both reward open sharing, and restrict services for non-sharing jurisdictions. 	<p>2009</p>
<p>D) Define Data Sharing Policy</p>	<ul style="list-style-type: none"> • Identify the level of distribution and security for each category of core base data. • Identify owner restrictions on core base data. • Develop an overall data sharing and licensing approach for clearinghouse internal data. • Provide templates for data sharing agreements that can be used by any jurisdiction. 	<p>2009</p>

GOAL #4 – SERVICES MODEL

In addition to providing a repository for timely and accurate data, ILGIC and the related GIS Implementation Unit should provide a suite of services and applications that further encourage greater leverage of GIS.

Objective	Achievement Steps	Timeframe
A) Provide toolsets to promote data standards & quality	<ul style="list-style-type: none"> Define a validation tool/script that assesses the level of standards compliance for a specific data layer. Publish downloadable best practice data model templates with corresponding data editor tools. Develop a website to enter meta-data and generate portable metadata files. Define web applications / tools to convert existing layers to standard exchange formats. 	2009 - 2011
B) Explore subscription based services to small jurisdictions	<ul style="list-style-type: none"> Define a model for hosting infrastructure for smaller jurisdictions. Define a model for providing data and web development services to smaller jurisdictions. 	
C) Establish Statewide Geocoding Services	<ul style="list-style-type: none"> Provide a service to upload user data, geo-code the data against the “unified centerline”, and returns a variety of map outputs to the user. Provide standard web services for geocoding. Develop translator and cleansing tools to convert a variety of formats into data recognizable by the unified geocoder. 	
D) Develop a “Map Illinois” interactive website	<ul style="list-style-type: none"> Define a web portal for data, standards, products, links to sources, and an interactive map. Develop a unified interactive map that uses all of the data in the clearing house, along with live data links made available. Define custom URLs for this map that allows jurisdictions to link to the site with their own extent. Define web services to allow jurisdictions to access data to include on their own website. 	
E) Prioritize applications and services that benefit stakeholders	<ul style="list-style-type: none"> Establish a project request and governance process to investigate and prioritize continuing projects. Focus on projects that provide overall benefit to most stakeholders. 	

COMMUNICATION, OUTREACH & EDUCATION

How can we inform the public and policymakers in the State of Illinois about the strategic benefit of GIS technologies, and promote technical and non-technical education related to those technologies?

GOAL #1 – BUILD SUPPORT FROM ELECTED OFFICIALS FOR GIS STRATEGIC PLAN

The goals in this strategic plan will require leadership and funding to accomplish. It will require the restructuring of ILGIC, the establishment of a supporting state GIS bureau, and implementation of technology infrastructure. To succeed, this plan must have the support of City Councils, County Boards, the state Legislature, the IL Governor’s Office, and impacted Illinois state agencies. The objectives below focus on building this support.

Objective	Achievement Steps	Timeframe
A) Develop support among most impacted State Agencies	<ul style="list-style-type: none"> • Develop talking points and ROI presentation. • Target presentations and relationships with CMS, IDOT, DNR, IDPH, SOS, and first responder agencies. • Promote informal collaborative projects to begin a central GIS approach. 	2008 - 2009
B) Identify political leaders most likely to serve as champions	<ul style="list-style-type: none"> • Review contacts and existing supporters of technology and mapping initiatives. • Develop and present a multi-media presentation for legislators. • Identify key committees needed for support. • Publish a fact sheet that can be distributed to lawmakers and aides. • Present the plan to current ILGIC members, which represent many of the target agencies. 	2009 - 2010
C) Develop support with the executives of the Governor’s office	<ul style="list-style-type: none"> • Identify key staff to begin communication efforts. • Benchmark Illinois with similar and surrounding states. • Present a financial case for the centralized GIS concept that identifies reduced costs, new revenues, impact on economic development, and risk mitigation. 	2009 - 2010

GOAL #2 – INCREASE AWARENESS OF THE IMPORTANCE OF GIS

Objective	Achievement Steps	Timeframe
A) Create a website and literature explaining the purpose of the organization, listing GIS success stories, and providing awareness of GIS happenings	<ul style="list-style-type: none"> Organize information from various groups. Create a professional website. Review website and begin creating informational printed brochures to be distributed throughout the State of Illinois. Discuss the creation of a regular newsletter of GIS happenings throughout the State of Illinois. 	<p>2009</p> <p>2010</p> <p>2011</p> <p>2012-2013</p>
B) Promote GIS Day	<ul style="list-style-type: none"> Sponsor a GIS Day Fair at the State Capitol to demonstrate GIS applications and benefits to lawmakers. Awards and prizes can show off strategic initiatives. Help jurisdictions in the same geographic area to coordinate their activities. Set up program examples and build support from GIS community. 	2009 +
C) Identify user groups and promote GIS among professional groups	<ul style="list-style-type: none"> Meet among the professional groups and associations to promote cooperation and unify efforts throughout the state. Identify groups/individuals that will keep the organizations abreast of GIS accomplishments, concerns, and refinements. Review objective and make corrections as necessary. 	<p>2009</p> <p>2010</p> <p>2011-2013</p>

GOAL #3 – SHOWCASE GIS BEST PRACTICES AND ROI

Objective	Achievement Steps	Timeframe
A) Collate a comprehensive set of GIS accomplishments and identify a target audience	<ul style="list-style-type: none"> Identify a group to find information on the best GIS practices. Identify a group to write descriptions of the best GIS practices and post them on the website and in literature. Review best practices and means of relaying information and make adjustments as necessary. 	<p>2009</p> <p>2010</p> <p>2011-2013</p>
B) Create and maintain an informational brochure that	<ul style="list-style-type: none"> Build on the existing brochure initiated through the GIS strategic planning group. 	2009

Objective	Achievement Steps	Timeframe
highlights the state of GIS and mapping in Illinois	<ul style="list-style-type: none"> • Create a new brochure every two years. • Distribute the current brochure. • Maintain content of the brochure. • Solicit feedback to build on successes. • Conduct an evaluation to determine if more than one type of brochure geared toward specific GIS activities or uses should be pursued. 	

GOAL #4 – PROMOTE GIS CAREERS THROUGH EDUCATIONAL CURRICULUMS

This goal aims to increase the accessibility of courses and other learning opportunities in GIS at all educational levels, K-12 through college. Promote and support programs provided in colleges and universities to students who have not yet entered the workforce.

Objective	Achievement Steps	Timeframe
A) Promote available courses to Students	<ul style="list-style-type: none"> • Create a website with comprehensive courses related to GIS. • Verify coursework is still available annually. 	2010 +
B) Create an internship program to increase opportunities for college students to work in agencies that use GIS	<ul style="list-style-type: none"> • Identify agency contacts and get descriptions of ongoing possibilities. • Link students with opportunities. 	2010 +
C) Develop activities that can be used in K-12 classrooms that promote the use of geospatial technologies	<ul style="list-style-type: none"> • The creation of new and collation of existing educational materials will be undertaken at the introductory (approx 5-7th grades) and the high school level. These will be made available to K-12 educators as well as to GIS professionals who may be helping in the K-12 classrooms. 	2010
D) Create a workshop for K-12 educators that can be provided at educational conferences, at the ILGISA meeting or at other appropriate venues	<ul style="list-style-type: none"> • This workshop would provide hands-on training in GIS and would help educators to become familiar with the materials developed in Objective C above. 	2011
E) Encourage participation of K-12 teachers at the ILGISA organization	<ul style="list-style-type: none"> • Increase awareness of the ILGISA meeting through announcements and provide opportunities at the ILGISA meeting geared toward educators at the K-12 level. • Consider the possibility of an ILGISA meeting in the summer that could accommodate the K-12 	2009

Objective	Achievement Steps	Timeframe
	school schedule.	

GOAL #5 – PROMOTE CONTINUING EDUCATION FOR GIS PROFESSIONALS

Objective	Achievement Steps	Timeframe
A) Determine the demand for specific application education among GIS professionals to provide direction in creating appropriate workshops and training opportunities, e.g. web mapping applications, tax parcel mapping, GPS	<ul style="list-style-type: none"> Conduct a survey of GIS professionals using existing groups to pass along the information about the survey. This will help to set priorities of workshops and to provide information to existing organizations that have ongoing meetings and training opportunities. 	2010
B) Create web-based information on private and public education and workshop activities that are geared toward the GIS professional	<ul style="list-style-type: none"> Highlight those college-level courses that meet in the evening, are on-line or meet only one time a week. Become a place where commercial entities would be asked to provide a structured description of their offerings. This structure would ensure that each listing contains about the same level of information along with a link to the firms' website. 	2011
C) Notify stakeholders of conferences, meetings, & papers	<ul style="list-style-type: none"> Utilize contacts to identify deadlines and upcoming conferences to market on the website. Create an RSS feed to identify GIS conferences and paper deadlines. 	2010

Next Steps

The *Illinois GIS Strategic Plan* encapsulates the vision and priorities of the GIS community in Illinois. It proposes a central organization to coordinate and improve the quality and accessibility of key geographical data throughout the state. It would establish a center of excellence in GIS to share applications and toolsets across all levels of government. It would provide GIS hosting and management services to smaller jurisdictions to level the playing field for their data.

As this strategic plan provides Illinois with a framework to enhance the State's ability to better serve Illinois citizens, the work has just begun. The development of a detailed *Illinois GIS Business Plan* is needed to evaluate and develop detailed implementation plans and budgets for consideration. Detailed proposals for the following items are targeted for the business plan.

- *Detailed Organizational Model with establishment steps*
- *Operational Scope of Services Model*
- *Five Year Expense Plan*
- *Five Year Funding Model*
- *Hiring / Staffing Plan*
- *Return on Investment Analysis for Services Model*
- *Project Charters for Priority Projects*

Most importantly, the resources needed to realize this vision can only be obtained by demonstrating its value to key decision makers throughout Illinois. The Strategic Planning Committee will be soliciting support and participation through working groups, services in kind, and presentations throughout the state. Visit www.ILGISCentral.org to learn more about how you can help.

A – PLANNING METHODOLOGY

2007 Planning Grant

Illinois' GIS stakeholders have been adept at coming together and meeting the GIS needs where possible. In October 2006, a core group of GIS professionals met to discuss the current status of GIS efforts in Illinois. This group became the *GIS Advisory Committee* (GISAC – See Appendix C). The Committee applied for one of the CAP grants related to the *Fifty States Initiative*.

In January 2007, the GISAC met with colleagues from Wisconsin, Indiana, and Missouri. The purpose of the meeting was to generate an objective venue where we could discuss different approaches taken by each of our neighboring states regarding coordination activities, coordination bodies, best practices, mistakes, unintended consequences, and situations beyond human control. The members of GISAC have had experience with other state approaches, however, it was important to recalibrate and take a fresh look at the information.

Once the grant was awarded, the Northern Illinois University (NIU), Center for Governmental Studies was engaged to facilitate upcoming meetings, document meetings, post material, and assist with the GIS strategic and business plans.

Statewide Stakeholder Meeting

A strategic planning exercise for identifying and prioritizing needs was conducted with over 100 attendees of the first stakeholder meeting. The participants were asked one question:

“As Illinois' GIS Stakeholders, what issues and activities do you think need to be addressed for statewide GIS coordination?”

Everyone in the room was supplied with 3x5 post-it-notes. Each participant wrote down as many responses as they deemed important, one response per note. They proceeded to the wall where they placed all their notes. Then participants went to the wall and organize the responses into affinity groups (responses that seem to fit together). There is no group discussion at this time. No one individual or group of individuals dominates. No one issue immediately takes up a lot of time while others get short shrift. Every response, and therefore, every idea is recorded and captured. The responses were then organized into general categories by the participants. The group then named each of the categories. The final step was to prioritize the categories. The categories identified were the following:

- Funding
- Standards & Accuracy
- Data Sharing & Distribution
- Aerial Photography
- Communications
- Data Security & Licensing
- Legislative Issues

- Organization Structure
- Resources
- Education & Training

Detailed notes from the session are available on the www.ILGISCentral.org website.

[Creation of Strategic Planning Committee](#)

At the conclusion of the meeting all participants were invited to nominate individuals to serve on a strategic planning committee that was scheduled to meet over the next several months. Professional criteria included; representation from various stakeholder categories, as well as, diverse business functions, and representatives with a wide range of experience. Personal characteristics included; time and passion, open-mindedness and flexibility. The GISAC reviewed the nominations and selected the GIS Strategic Planning Committee (GISSPC – Refer to Appendix B). The GISSPC is charged with working through the facilitated strategic planning process and structuring the GIS strategic and business plans.

[Workshop #1 – Visioning, Internal & External Environment](#)

At the first meeting of the Strategic Planning Committee the group was asked to respond to the phrase: **“In 15-20 years when I return to Illinois I hope to see.....”** As a result of that exercise the following draft vision statement was developed:

The Illinois Statewide GIS Initiative will provide GIS leadership, coordination and services to public and private entities that serve the citizens of Illinois.

The notes that were utilized to create the vision statement can be found in detail in the appendix.

The next step of the strategic planning process was a review of the internal and external factors present in the environment that could potentially impact the success of a statewide GIS entity. Participants were now asked to identify what constraints and practical difficulties were likely to be encountered, or would make it difficult, to achieve the desired future state.

Participants were introduced to a leadership exercise entitled “Surrender or Lead.” The premise is that sub-groups of the participants work to develop responses to some simple, but extremely effective and thought provoking questions. Participant members were broken up into five working groups and asked to respond to a series of structured questions designed to initiate discussion and reveal perspectives, challenges and frustrations of the participants as a whole. Detailed notes from the session are available on the www.ILGISCentral.org website.

[Workshop #2 - Strengths, Weaknesses, Opportunities, Challenges \(SWOC\)](#)

The next exercise was a classical component of a strategic planning process, a SWOC analysis. SWOC analysis asks participants to identify/recognize the initiative’s strengths and weaknesses. It also asks participants to think about the external opportunities and challenges that might

impact on the success of the initiative. The results of the “rapid fire” SWOC analysis can be found on the www.ILGISCentral.org website.

Workshop #3 – Issues, Goals, and Objectives

The next step in the process is to identify the strategic issues that must be addressed in order to achieve the vision. Then goals and objectives are developed to address each issue. The strategic planning committee identified the strategic issues. Sub-groups of the overall planning committee developed the goals and objectives in this plan.

Listening Sessions

Listening Sessions across Illinois are scheduled through the summer of 2008 to present this draft strategic plan and obtain feedback from stakeholders. Feedback will inform updates to both this plan and a subsequent Business Plan.

B – STRATEGIC PLANNING COMMITTEE

<u>First</u>	<u>Last</u>	<u>Agency</u>
Joye	Baker	Adams County
Mark	Becker	Hamilton County Berns, Clancy and Associates Engineers, Surveyors and Planners
Tom	Berns	
Shawn	Blobaum	Bruce Harris & Associates
Dennis	Bomke	Bureau of Air, Illinois EPA
Jim	Conlon	GIS Solutions, Inc
Max	Dieber	UIC College of Urban Planning and Public Affairs
Bill	Faedtke	DuPage County
Peter	Ferretti	Village of Barrington Hills
Fred	Halenar	City of Champaign
Greg	Johnson, GISP	Will County
Mark	Kinkade	IDOT
Mike	Koutnik	ESRI
Molly	Mangan	City of Chicago
Thomas	Medder	Southwestern Illinois RC&D
Sheryl	Oliver	Illinois Department of Natural Resources
Pete	Piet	City of Elmhurst
Vasudha	Pinnamaraju	City of Decatur
Patrick	Poepping	Poepping Stone Bach & Assoc
Diane	Redwitz	Kankakee County Highway Department
Marilyn O.	Ruiz, PhD	UIUC School of Veterinary Medicine
Jeffrey L.	Simpson	Effingham County
Mark	Toalson	Champaign County Regional Planning Commission
Christopher	Young	5th WMD CST, IL ARNG

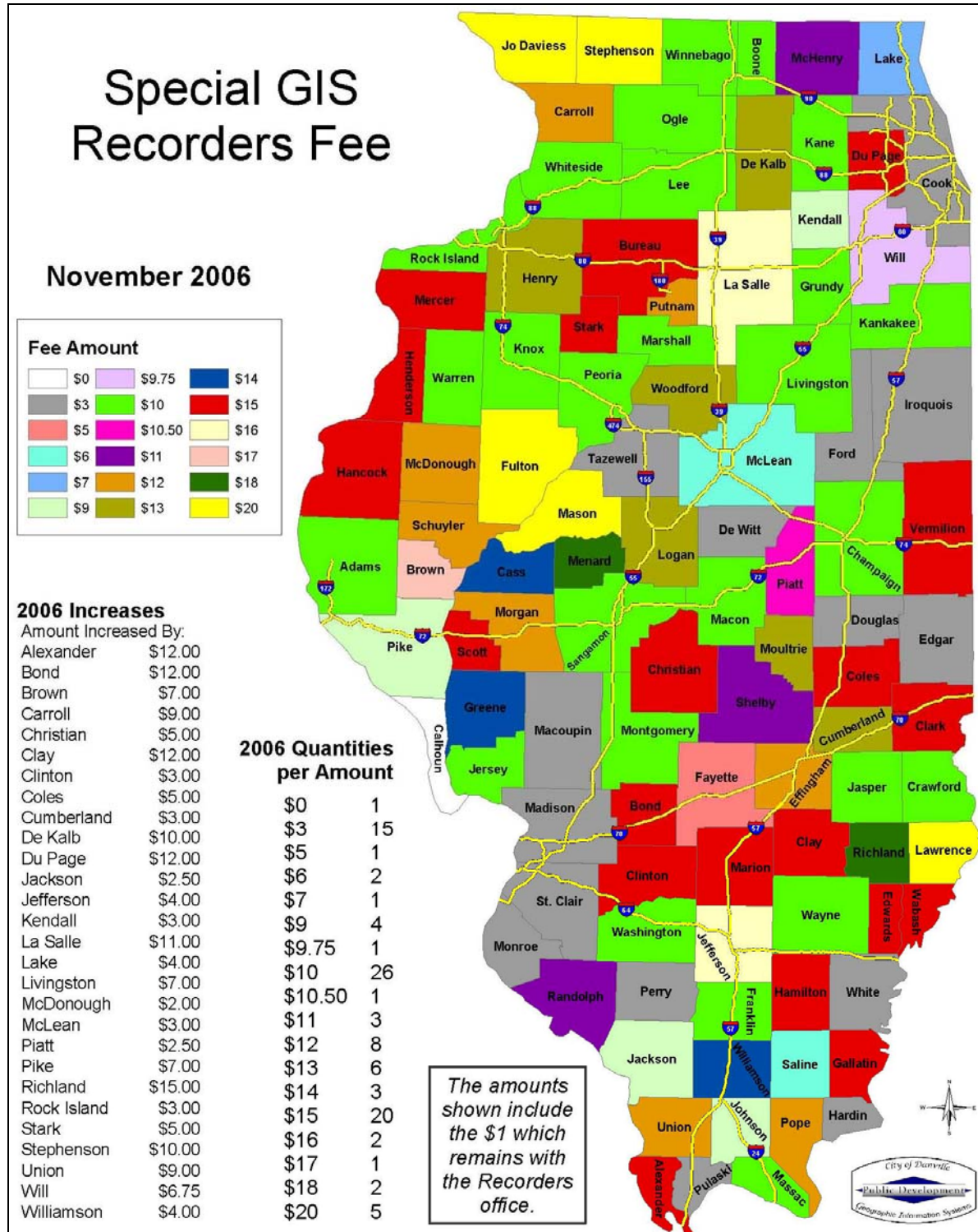
C – GIS ADVISORY COMMITTEE (GISAC)

<u>Member</u>	<u>Organization</u>	<u>Email</u>
Sheryl Oliver	IL DNR/IL Geog. Info. Council	Sheryl.Oliver@illinois.gov
Shelley Silch	U.S. Geological Survey	ssilch@usgs.gov
Dennis Bomke	IL Environmental Protection Agency	Dennis.Bomke@illinois.gov
Amy Eller	Illinois Dept. of Transportation	Amy.Eller@illinois.gov
Bill Faedtke	DuPage County	wfaedtke@dupageco.org
Rob Krumm	Illinois State Geological Survey	krumm@isgs.uiuc.edu
Ken Lovett	Formerly Illinois Dept. of Revenue	Ken.Lovett@illinois.gov
Donald Luman	Illinois State Geological Survey	luman@isgs.uiuc.edu
Phil Pittman	Illinois Dept. of Public Health	phil.pittman@illinois.gov
Curt Reynolds	Illinois Dept. of Transportation	reynoldscm@dot.il.gov
Mark Toalson	City of Champaign	Mark.Toalson@ci.champaign.il.us
Dan Wilcox	Illinois Dept. of Agriculture	Dan.Wilcox@illinois.gov

D – MAP INDEX

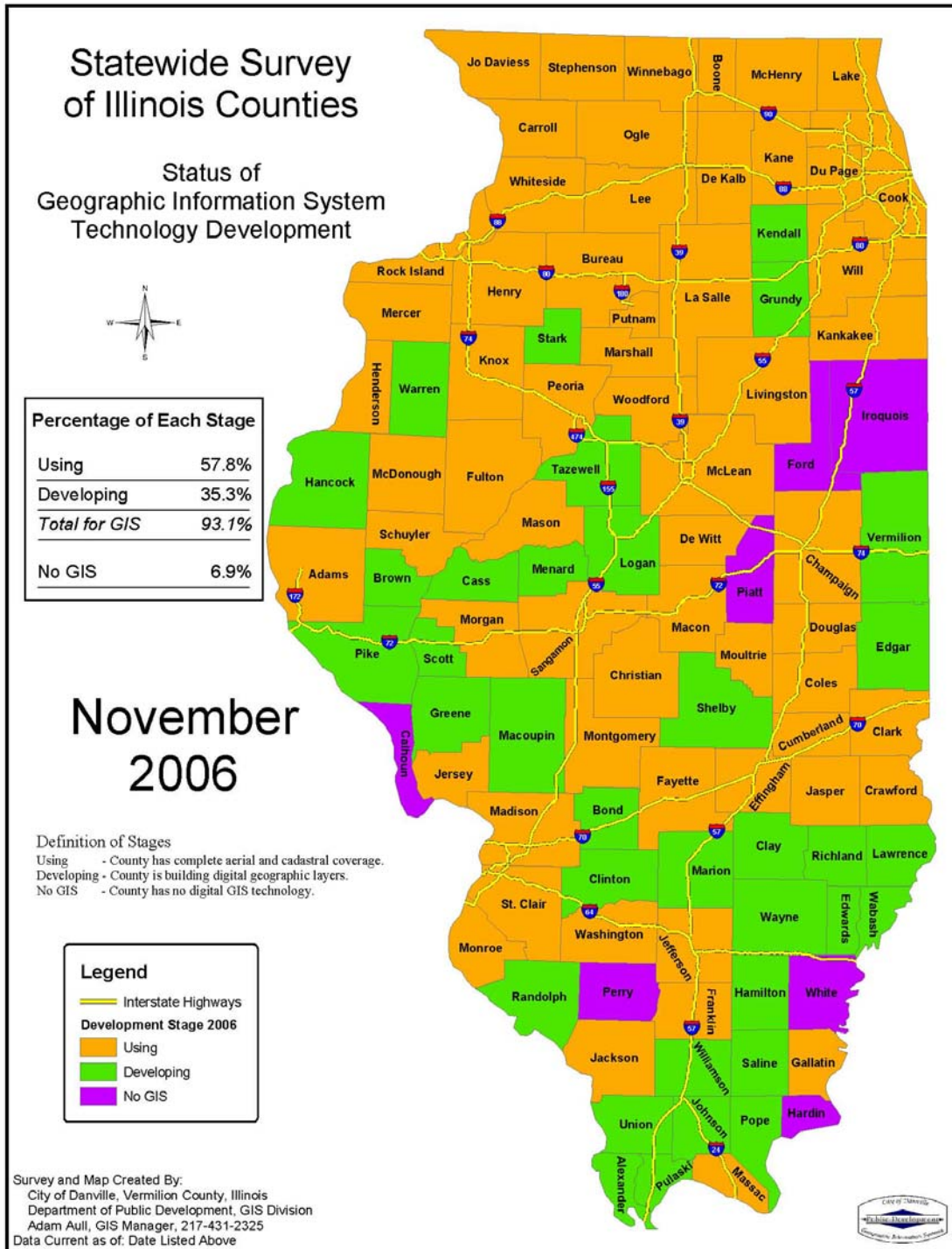
November 2006 Map – Special GIS Recorders Fee Usage

This map was produced by the *City of Danville* Geographic Information Systems division.



November 2006 Map – IL County Usage of GIS

This map was produced by the *City of Danville* Geographic Information Systems division.



E –2008 ISGS SURVEY OF THE STATUS OF PUBLIC SECTOR GEOGRAPHIC INFORMATION SYSTEMS IN ILLINOIS.

A statewide survey was conducted in July 2008 by the Illinois State Geological Survey to assess the level of use of GIS applications in Illinois. The full report can be found at <http://www.ILGISCentral.org> . An excerpt of the survey conclusions is provided below.

Conclusions

Survey respondents were categorized into those who use GIS (users) and those who either do not personally use GIS for their work or their department does not use GIS (non-users). Users tended to be from municipalities with more than 15,000 residents (30%) and county (30%) organizations. Non-users tended to be from municipalities with less than 30,000 residents (38%) and Colleges or Universities (29%). More than half of both users (63%) and non-users (54%) indicated government as one of their job functions.

- ◆ Fifteen percent of GIS users indicated that they have no GIS staff in their department or organization. Interestingly, eight percent of GIS users specifically indicated they do not know their primary GIS software for data creation and maintenance.
- ◆ Users obtain their GIS data from various sources including external government agencies, partnerships with other agencies, in-house creation, and purchased or licenses from commercial sources. Yet, less than half of GIS users charge a fee at least some of the time for data they provide. For some users, supplying data was based on reciprocity or charged a fee based on either the cost of reproduction or the cost of producing and maintaining the data.
- ◆ Users were undecided on the clarity and ease of understanding Illinois statutes regarding GIS data access and GIS costs.
- ◆ Twenty seven percent of GIS users indicated they are not using and 31% of users did not know if they were using standards for documentation of GIS data compilation.
- ◆ Support was indicated by 48% of users who indicated that agencies with similar responsibilities should work cooperatively.
- ◆ Two-thirds of users (68%) were familiar with the Illinois GIS Clearinghouse web site.
- ◆ GIS users indicated funding as the first priority of broad issues for GIS in Illinois. For non-users, budget restrictions were the most frequently selected impediment to implementing GIS in their department or organization.
- ◆ Land use, planning, community development, zoning, and economic development were the top five selected GIS uses for both users and non-users,
- ◆ The most frequently selected first useful type of geospatial information GIS could provide was aerial photography or digital orthophotography by both the user and non-user respondents in the survey.
- ◆ Users (78%) had higher agreement than non-users (62%) for their department making use of a program in Illinois to assist in creating and supporting partnership with other agencies and organizations. However, for both groups a majority did agree or strongly agree that their department would make use of such a program.
- ◆ Three quarters of users and non-users would make use of a program in Illinois to assist in identifying and applying for grants.