

Southwestern Illinois Resource Plan

*Preserving
Yesterday*

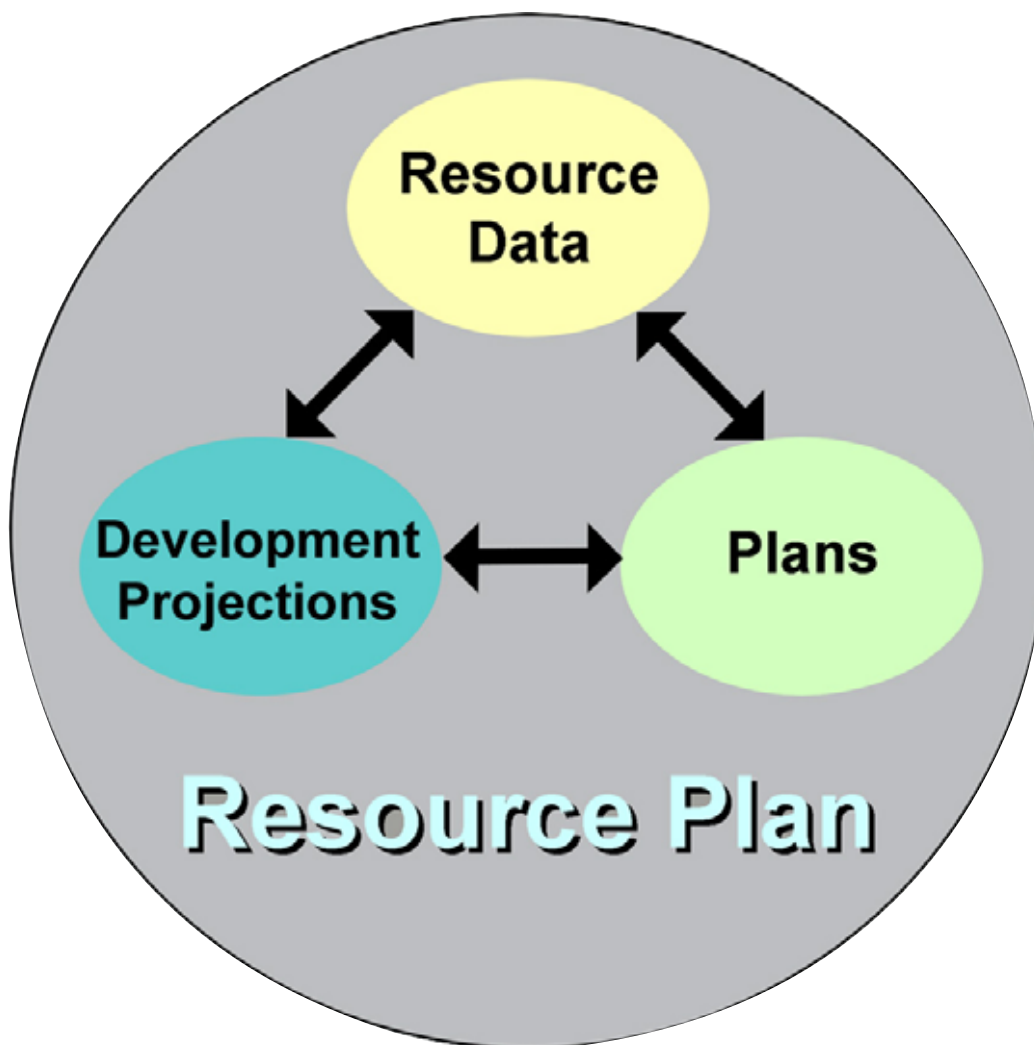
*Participating
Today*

*Planning
Tomorrow*



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Executive Summary

The following report summarizes the efforts brought forth by the Southwestern Illinois RC&D, Inc., in cooperation with the University of Illinois Department of Urban and Regional Planning, local governments and stakeholders, and state agencies, to develop a Resource Plan for Madison, Monroe, Randolph, and St. Clair counties in Southwestern Illinois. The intent of this project is to provide technical assistance that will strengthen future partnerships between counties and municipalities in the development of local plans. At the core of a resource plan is an integrated document which includes inventories, analyses, and strategies for preserving critical farmland, natural areas, and cultural resources.

The Southwestern Illinois Resource Plan is much more than this document; is an innovative, dynamic tool that uses a Geographic Information System (GIS) to enhance the planning process. GIS is used to compare and contrast three key types of information: an inventory of existing resources, projections of future development, and existing plans. An overlay analysis approach using the three types of information can be used to identify conflicts or consistencies of existing and planned land use, evaluate planning alternatives, and identify potential impacts of development scenarios or policies. Benefits of using GIS include the ability to easily update or add information, create custom maps in electronic or paper formats, and generate tabular reports or graphs to summarize analysis.

This effort is one of three pilot projects in Illinois to pursue the intent of the Local Legacy Act (P.A. 93-0328) without the extensive structure of boards, committees, and rules outlined in the Act. The Local Legacy Act was passed without fiscal resources to support staffing or grant for local governments. The pilot projects use existing programs and partnerships, in combination with innovations in computer technology and planning theory to demonstrate that a Legacy (or Resource) Plan can be developed through engagement with local leaders and stakeholders, without a complex oversight process.

The information compiled for this Resource Plan comes from a variety of sources. The inventory of natural, cultural, and agricultural resources builds on the digital data library of the Southwestern Illinois GIS Resource Center. Development projections for Madison, St. Clair, and Monroe counties are outputs of the Land Use Evolution and Impact Assessment Model (LEAM) developed by the University of Illinois for this region with the assistance of East-West Gateway Council of Governments. Projected development in Randolph County has been delineated by the Director of Economic Development for the county. Planning documents and maps were requested from local governments, agencies, and organizations. Maps showing plans for future land use have been digitized into a GIS-based system of plans allowing multiple plans to be queried, analyzed, or displayed on the same map. Additional plans, updated resource data, or refined projections of future development can – and should – be incorporated into this Resource Plan as they become available.

This Resource Plan is the result of input from local stakeholders and leaders. A series of meetings was held in September 2004 to introduce the project at the local level as well as to request planning documents. During the following months data was gathered and refined, and plans were converted to a GIS format. Efforts to gather plans from communities surfaced the fact that many municipal comprehensive plans are so badly out of date that they are not being used for local planning. Despite this issue, more than twenty planning documents were collected and digitized. Analysis of data, plans, and development projections occurred in the spring and summer of 2005. During that time, the project was presented at meetings of local stakeholders, such as the C2000 Ecosystem Partnerships. A draft of this document was presented at two meetings in August 2005 that were attended by resource managers, city officials, planners, and local stakeholders.

The examples of analysis included in this document are only a few of the possibilities for comparing multiple layers of information. In many cases, the analysis is only first step toward addressing planning

issues and opportunities. Once the analysis shows an area of conflict or opportunity, the next step is to consider alternatives and potential policies to mitigate the impacts or exploit the potential of resources. Additional analysis may be necessary. The series of examples on pages 18, 19, 20 and 21, illustrates the way that one analysis can lead to the next. Several tools and strategies for addressing regional and local resource issues are included in the last section of the document, but it is up to local leaders to determine which strategies are appropriate for their community to use.

The dynamic nature of the Resource Plan is a great strength, but it creates a challenge for updating and disseminating the most current information. Possible mechanisms for implementation include the use of a web-based GIS application (ArcIMS) to display layers of information, distribution of data sets to GIS users, custom mapping and analysis by request, or on-site interactive analysis services during planning sessions. The wide range of GIS capacity within local governments indicates that a variety of implementation options will be needed.

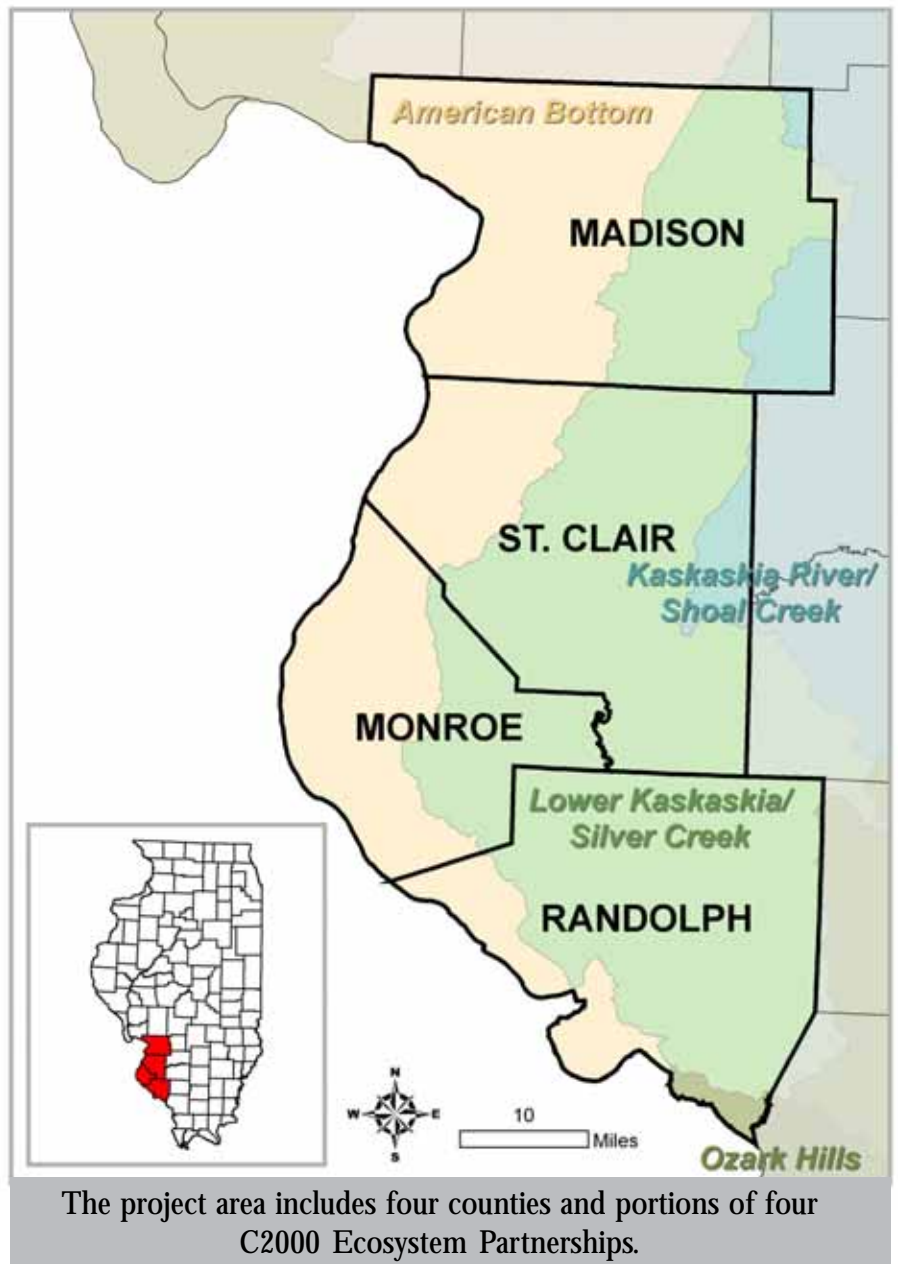
This document should be used as a starting point for local planning efforts. The investment in gathering resource data layers, existing plans, and development projections gives local planners a great start on developing plans that respond to the many important resource in Southwestern Illinois. Through this project, many of the initial tasks of developing a compendium of GIS information have been accomplished for the benefit of the region. The examples of analysis using this information are meant to spark ideas for the potential of this approach, with the hope that stakeholders will use this Resource Plan to investigate the issues of local concern and then incorporate the tools and strategies into plans to address those issues. The development of this Resource Plan is a great asset to the people of Southwestern Illinois, and putting it into action for local planning is essential to realizing the benefits that it offers.

Introduction

The Southwestern Illinois Resource Plan is an effort to provide technical assistance and an innovative planning tool to develop and implement a resource protection plan for Madison, Monroe, St. Clair, and Randolph counties. Although the State of Illinois has passed several pieces of legislation (including the Local Legacy Act and the Local Planning Technical Assistance Act) to assist in planning for future growth in urban areas, the state currently lacks the funds to support them. The Southwestern Illinois Resource Plan is one of three pilot projects in Illinois that will use the concepts of enacted planning legislation without the burdensome requirements of the legislation. Using innovations in computer technology and planning theory, these pilot projects demonstrate that plans can be developed that will engage local government officials and stakeholders. Planning activities occurring in urban areas can be integrated without the complexity of the oversight process (board, commission, rules) as required in the Local Legacy Act (P.A. 93-0328). The project builds on existing state-level programs, collaboration with local planning organizations for data acquisition needs, and cooperation with local officials. It is the goal of these pilot projects to develop innovative planning tools, informally engage local stakeholders, and build from existing local planning activities and state programs so that the state will provide a much more efficient and valuable process than established in the Act.

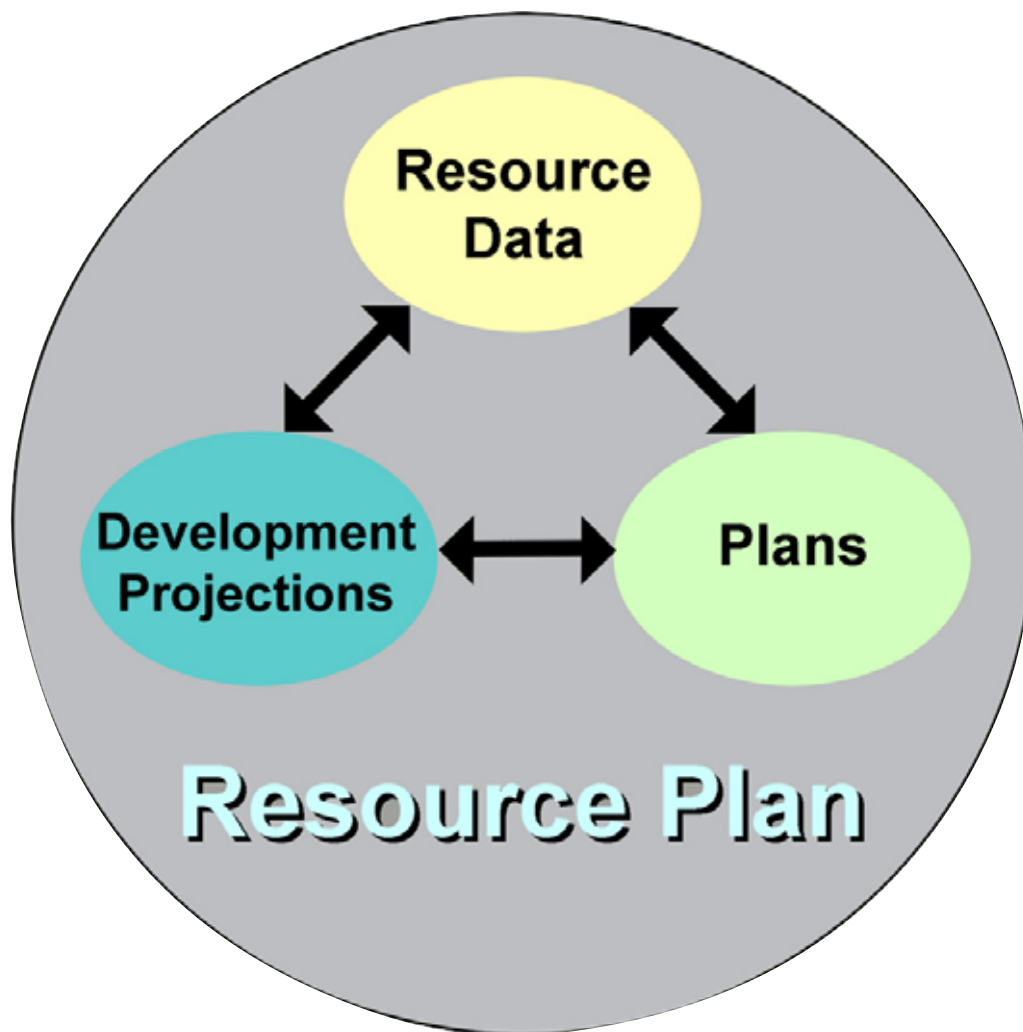
While the focus of the pilot project is to engage local stakeholders, some technical assistance, funding, and leadership is provided by state agencies. The Illinois Department of Natural Resources is the lead agency for this effort. The Department of Agriculture and the Historic Preservation Agency also provide technical assistance for the project. At the local level, Southwestern Illinois Resource Conservation & Development (RC&D) and the RC&D's GIS Resource Center have coordinated data gathering and public involvement in the Southwestern Illinois pilot project area. Fiscal support for the Resource Plan is provided through IDNR's Conservation 2000 Ecosystems Program. The majority of the project area is within the American Bottom and Lower Kaskaskia/Silver Creek ecosystem partnerships. The Kaskaskia River/Shoal Creek and Ozark Hills ecosystem partnerships make up the balance of the project area.

The outcome of this Resource Plan pilot project is not a static plan that

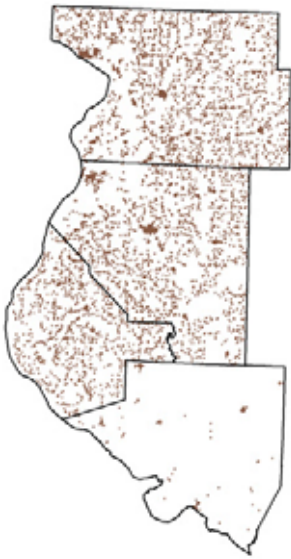


will sit on a shelf and quickly become outdated. The Resource Plan is a dynamic tool that can be easily modified and updated as new information becomes available or as planning issues arise. The key to this dynamic approach to planning is cooperation among local planners, resource specialists, and decision-makers to develop and use a regional Geographic Information System (GIS). GIS allows many different pieces of tabular and geographic information to be brought together for analysis. An infinite number of questions can quickly be answered by querying and comparing different layers of information. With GIS, analysis produces not only quantitative answers, but also spatial answers. Results can be displayed as maps or as tabular data. One of the many benefits of the GIS-based approach is that new information, updated plans, and additional scenarios for projected development can be added to the existing GIS information as they become available.

This document summarizes the progress of the Resource Plan to date and should be used as tool to brainstorm the possibilities for this approach. There are sections for each of the components used in the Resource Plan approach: Resource Inventory, System of Plans, and Development Projections. A final section includes examples of overlay analysis using combinations of the components. These examples illustrate a few ways that the Resource Plan can be used to answer questions about resource issues. This Resource Plan is the starting point for a new level of analysis-based decision-making in Southwestern Illinois.



Resource Inventory



Illinois Historic Preservation Agency Standing Structure Surveyed Properties

The IHPA Preservation Services Division has converted paper files and maps of historic features and structures to GIS for use in the Historic Architecture and Archaeological Geographic Information System (HAARGIS). HAARGIS includes:

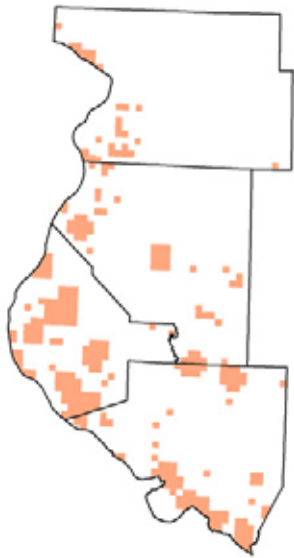
- Properties on the National Register of Historic Places (NRHP)
- Properties that have been determined eligible for the NRHP
- Bridges identified in the Historic Bridge Survey
- Properties identified in the Illinois Historic Structures Survey
- Properties identified in the Illinois Historic Landmarks Survey
- Properties identified in the Illinois Rural Survey pilot project (Madison, St. Clair, & Monroe only)

The original surveys that have been compiled for HAARGIS were completed in the 1970's and have not been systematically verified or updated since that time. For the Southwestern Illinois Resource Plan, local contacts provided assistance in updating the HAARGIS information. Demolished sites were removed from the database, addresses were corrected, and additional details were added to the database. HAARGIS is still far from perfect, but it is steadily improving through the efforts of concerned citizens. For more information: www.state.il.us/hpa/PS/haargishi.htm



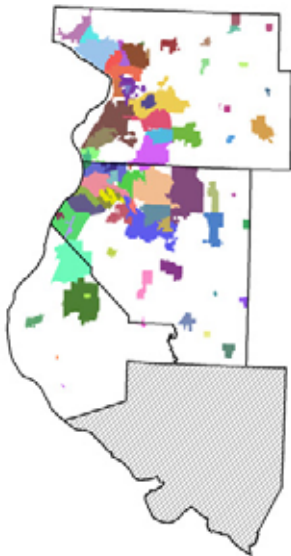
National Register of Historic Places - Districts

The National Register of Historic Places is the Nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior. This GIS information was plotted by staff at the Illinois State Museum and the Illinois Historic Preservation Agency and is included in the HAARGIS database. These district boundaries are approximate, based primarily on city streets (specific verbal boundaries can be found in the National Register application for the district). For more information: www.cr.nps.gov/nr/about.htm



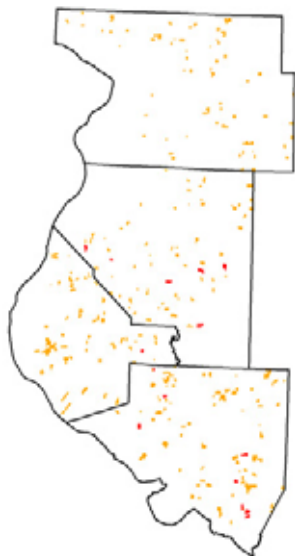
Threatened & Endangered Species (generalized locations)

This data represents the sections within the Public Land Survey System (township and range) that have at least one known location of species that is listed as threatened or endangered at the state or federal level. No information about the number or type of species within the section is included with the data. This information was provided by the Illinois Department of Natural Resources and is based on the Natural Heritage Database maintained by IDNR's Division of Habitat Resources. This data was generated in November, 2004. It should be used with the understanding that the Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of significant natural features in Illinois. This data is not a substitute for on-site surveys required for environmental assessments. For more information: dnr.state.il.us/conservation/naturalheritage/inhd.htm



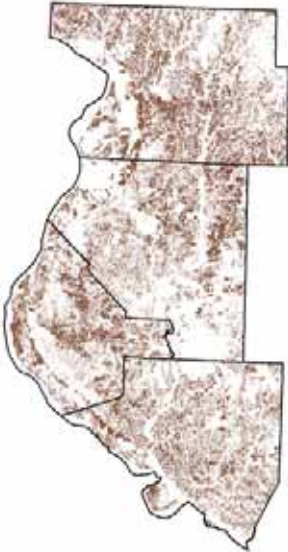
Facility Planning Area Boundaries

A Facility Planning Area (FPA) is defined as a geographical area for the planning, treatment or transport of liquid domestic wastewater and its residual solids. Because the extension of centralized sewer service. The extension of centralized sewer service can be used as an indicator of planned future development, because it is one of the first steps in the process of developing new land. These FPA boundaries are based on AutoCAD files and paper maps provided by Southwestern Illinois Planning Commission in November, 2004. For more information: www.epa.state.il.us/water/watershed/facility-planning/facility-planning.pdf



Centennial & Sesquicentennial Farms

The Illinois Centennial and Sesquicentennial Farms (C&S Farms) program recognizes landowners who have maintained family farms for at least 100 years. These farms can be considered a cultural resource as well as an agricultural resource. An agricultural property must have been owned by the same family for at least 100 years to qualify for Centennial Farm status. Sesquicentennial farm status is awarded to farms that have been owned by the same family for at least 150 years. Property owners apply for the designation through the Illinois Department of Agriculture. There are no special restrictions or requirements for C&S Farms and subsequent changes in ownership are not monitored by the Illinois Department of Agriculture. It is possible that some of the farms in the C&S Farms database have been sold to non-family members or have been converted to other land uses in subsequent years. This GIS data was created by digitizing farm boundaries over aerial photography based on legal land descriptions of Centennial and Sesquicentennial Farms from the Illinois Department of Agriculture's database of properties. This data should be used with the understanding that the accuracy is limited by the lack of updates to the database as well as the lack of spatially accurate property boundary information. For more information: www.agr.state.il.us/marketing/domestic.html



Prime and Important Farmland

Digital soil surveys developed by the U.S. Department of Agriculture – Natural Resources Conservation Service include a wealth of information for each soil type within a county. NRCS identifies certain soil types as prime farmland, defined as “land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops”. Additional soil types (not shown on this map) may be considered prime if they overcome certain limitations, such as susceptibility to flooding or poor drainage. While these soils and their limitations are identified by NRCS, there is no way to determine which of these soils have overcome the limitations except for on-site investigation. Another designation applied to soil types in the digital soil surveys is “farmland of statewide importance”. Soil types that are not identified as “prime” by NRCS but that meet criteria determined by the state may be identified as “important”. For more information: soildatamart.nrcs.usda.gov/



Agricultural Conservation and Protection Areas

Under the Agricultural Areas Conservation and Protection Act (505 ILCS 5/1 et seq.), county board members have the authority to establish Ag Areas for the purpose of protecting the local agricultural land base. Land within an Ag Area is protected from locally initiated projects that would convert the land to other uses. Landowners with property enrolled are exempt from local laws that would unreasonably restrict normal farming practices and from special benefits assessments that are not in their best interests. When property is enrolled in an Ag Area, it must remain in agricultural use for at least 10 years. After 10 years, land may be re-enrolled every eight years. No land may be included within an Ag Area without the consent of the landowner. This GIS data was created by digitizing the Ag Areas published in the Illinois Department of Agriculture’s *2002 Agricultural Areas Annual Report*. No additional Ag Areas were created in this region in 2003 or 2004. For more information: www.agr.state.il.us/Environment/LandWater/agareafacts.html



Streams (Illinois Environmental Protection Agency 303d)

This information is part of the data collected by the Illinois EPA to satisfy reporting requirements found in Section 303(d) of the Federal Clean Water Act. Stream segments are evaluated and monitored for pollution or other problems that may limit their use. Streams that have problems affecting their designated uses (fish consumption, source of drinking water, swimming, etc.) are listed as impaired waters (shown in red). This information is based on the 303(d) list for 2004. For more information: www.epa.state.il.us/water/tmdl/303d-list.html

Land Cover (2000)



The land cover data used for the Resource Plan analysis in Madison, St. Clair, and Monroe counties is a customized dataset developed for the LEAM project (see the section on Growth Projections). The dataset was developed to address the differences in the availability of current land cover data for the LEAM project area. The best available data for the Illinois portion of the LEAM project area was the 1999-2000 land cover dataset developed by the U.S. Department of Agriculture-National Agricultural Statistics Service, the Illinois Department of Agriculture and the Illinois Department of Natural Resources. The best available data for the Missouri portion of the LEAM project area was the 1992 National Land Cover Dataset (NLCD) developed by the U.S. Geological Survey. The Illinois data and the NLCD data for Missouri were merged into a seamless dataset. The differences in the land cover classification systems were reconciled by reclassifying the Illinois data to match the NLCD system. The Illinois data was corrected by the staff of the Southwestern Illinois GIS Resource Center based on knowledge of the region and checked against 2000 Census data. Randolph County is not part of the LEAM project area, so the 1999-2000 Illinois land cover data is being used as it was published without corrections. The categories have simply been regrouped to match the NLCD classification system.

To simplify analysis, a more generalized land cover classification system was used for the Resource Plan. Land cover categories from the final land cover dataset (NLCD classification) were grouped into general land cover types. “Agricultural land” includes the following land cover classes: pasture/hay, row crops and small grains. “Forested land” includes deciduous forest, evergreen forest and mixed forest. “Wetlands” includes woody wetlands and emergent herbaceous wetlands. “Grasslands” includes grasslands/herbaceous and urban/recreational grasses. For more information on the land cover dataset, please contact the Southwestern Illinois GIS Resource Center or go to www.lead.uiuc.edu/

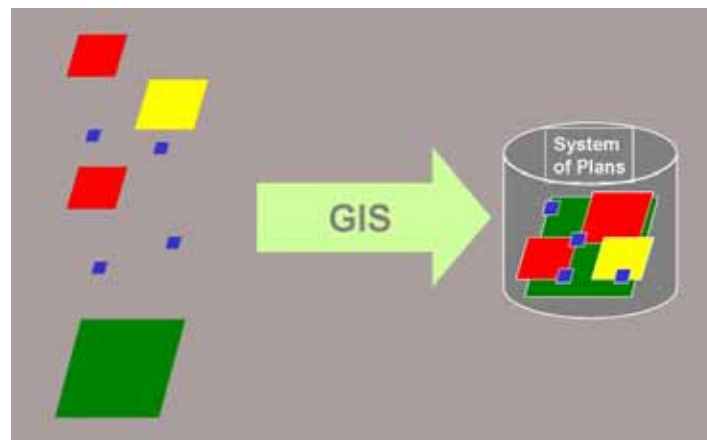


Sinkhole Areas (an indicator of karst terrain)

This data, published by the Illinois State Geological Survey in 1997, shows the distribution of areas that contain one or more sinkholes. Sinkholes are one of the major indicators of karst terrains. Other indicators include caves, large springs and underground streams, and soluble bedrock such as limestone. Karst areas are susceptible to aquifer contamination and may also lack the stability required for certain land-uses. For more information: ww.isgs.uiuc.edu/nsdihome/outmeta/karst.html

System of Plans

A system of plans is a more effective way to understand the future development of a region than any one traditional comprehensive plan. Digital plans and databases can be compiled and analyzed using a Geographic Information System (GIS). A system of plans brings together planning documents from various municipalities and agencies and allows for parts of different plans relevant to a particular decision situation to be retrieved to see where gaps, conflicts and commonality among plans exist, leading to a more informed decision-making process. These plans may include watershed plans, county or municipal comprehensive plans, transportation plans, and sewer and water infrastructure plans to name just a few. One of the greatest advantages of the system of plans approach is that information can be easily updated as plans are adopted or updated. This system of plans is a foundation to build on in the future.

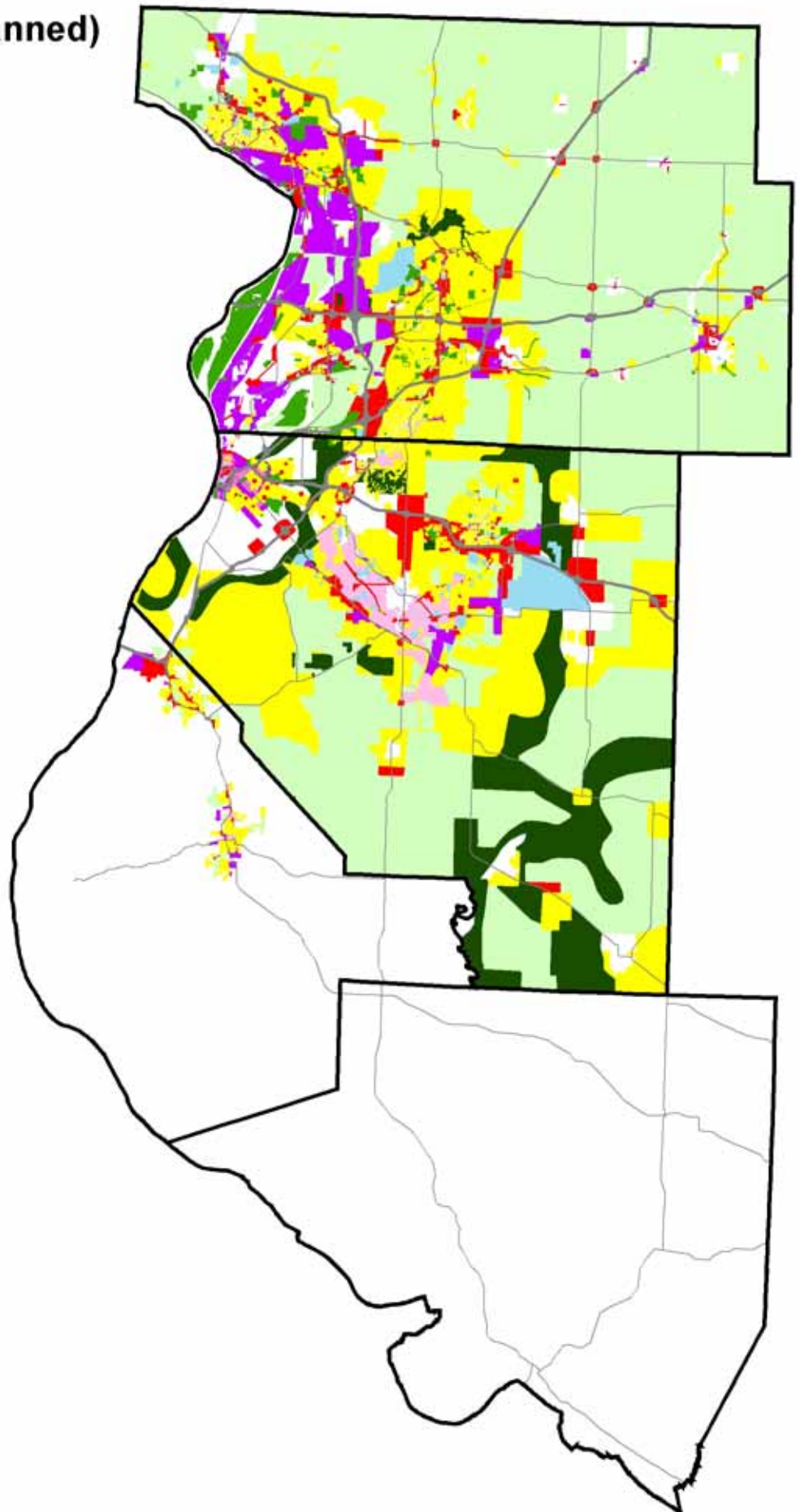


Plans were requested from county and municipal governments and planning agencies. The system of plans approach incorporates plans at scales ranging from region-wide to community level. Plans and maps were submitted in a variety of formats ranging from printed documents to digital files (PDF, AutoCAD, JPEG). Most municipalities submitted a complete printed copy of their most current comprehensive plan. A few communities provided zoning information in lieu of plans. Maps illustrating future land use, transportation, open space/ greenways or development plans were synthesized into the system of plans using GIS. Any quantifiable policies and goals were extracted from the written portion of the plans and saved as digital files to accompany the spatial information. With the system of plans in GIS format, comparing dozens of plans and analyzing their potential impacts becomes a simple matter of querying out relevant information and using overlay analysis techniques. The system of plans can be compared to resource inventories, growth projections or any other GIS data.

Future Land Use (Planned)

from various plans, compiled July 2005

-  Residential
-  Commercial
-  Industrial
-  Mixed Use
-  Public/Institutional
-  Park
-  Non-Urban
-  Conservation
-  Major Road



Documents & Maps compiled for the Resource Plan

Alton Comprehensive Plan 2003	Madison County 2020 Land Use Plan 2003
Belleville Comprehensive Plan 2000	Maryville 2020 Future Land Use and Transportation Plan 2004 (map only)
Brooklyn Waterfront Development Master Plan 2004	O'Fallon 2001 Comprehensive Plan
Caseyville Community Plan 1973	Pontoon Beach Zone District Map 2005
Caseyville Comprehensive Plan Update 2003 (northeast only)	Shiloh Comprehensive Plan 2004 (maps only)
Collinsville Vision 20/11 Comprehensive Plan 1997	St. Clair County Comprehensive Plan 1991
Columbia 20/20 Master Plan & Zone District Map 2005	St. Clair County Greenspace Plan 1995
East Alton Zone District Map 2004	Swansea Comprehensive Community Master Plan 1993 (no maps)
East St. Louis Comprehensive Plan 2004	Waterloo Zoning Map 2004
East St. Louis Waterfront Development Master Plan 2004	Wood River Illinois 255 Corridor Development Plan 2002
Edwardsville Comprehensive Plan 1999	
Glen Carbon Comprehensive Plan 2002	

One of the challenges of developing the system of plans is the wide range of classification systems that are used for land use planning. In order to display many plans on the same map using a consistent color scheme, a reclassification table was developed. The reclassification table allows the original land use designation to be preserved, while linking the land use designation to a simplified category system for display with other plans. While this approach diminishes the fine points of the original categories, it is an essential tool for effectively displaying and querying the many different plans. The following example illustrates the differences in categories between two future land use plans and the simplified reclassified categories:

	Planned Land Use	Reclassified Land Use
Alton		
	Business Park	Commercial
	Commercial	Commercial
	Industrial and Utilities	Industrial
	Downtown	Mixed Use
	Parks and Open Space	Park
	College	Public/Institutional
	Health Services	Public/Institutional
	Public/Semi Public	Public/Institutional
	General Residential	Residential
	Single-Family Residential	Residential
	Urban Residential	Residential
East St. Louis		
	Neighborhood Commercial	Commercial
	Regional Commercial	Commercial
	Industrial	Industrial
	Light Industrial/Technology	Industrial
	CBD/Mixed Use	Mixed Use
	Entertainment/Civic/Residential District	Mixed Use
	Residential Loft Live/Work	Mixed Use
	Transit Oriented Development	Mixed Use
	Parks/Open Space	Park
	Multi-Family	Residential
	Single-Family	Residential

Development Projections

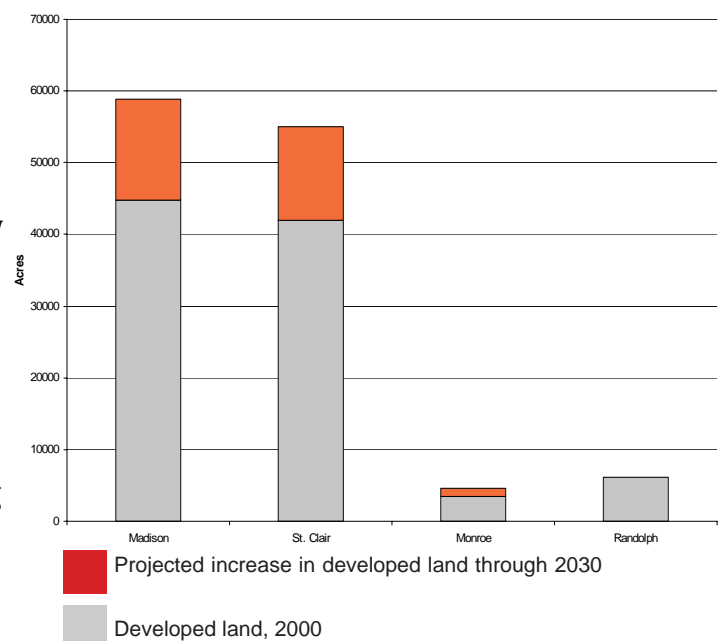
A key component of this approach to resource planning is the use of development projections. Projections are a useful tool in identifying where development is likely to occur so that the potential impacts of development may be evaluated. While no attempt to project development is perfectly accurate, a reasonably accurate picture of future development is an important tool for resource planning efforts. Two different approaches to projecting development are used in this Resource Plan. One is a sophisticated computer-based tool, the other is the result of years of experience.

Through a partnership with East-West Gateway Council of Governments, the University of Illinois has developed a computer based tool that simulates land use change across space and time. This tool, the Land Use Evolution and Impact Assessment Model (LEAM), has been customized for the St. Louis metropolitan area (Clinton, Jersey, Madison, Monroe, and St. Clair counties in Illinois; Franklin, Jefferson, St. Charles, and St. Louis in Missouri). Localized data and sub-models have been developed through the input of local citizens, planners and policymakers. The sub-models capture the relationships between systems (transportation, economics, etc.) and land use change and convert them to mathematical terms. The LEAM model uses the sub-models to drive the simulation of land use change over time. Economics, transportation, utilities, neighboring land uses and random chance all contribute to a final growth decision within a given unit of land. Each of these factors is weighted to determine development probability. Based on this probability value, the land use classification of a given unit of land either remains as its initial type or transitions to a new urban type.

The output is a GIS data layer that shows a snapshot of land use at a certain point in time. Additionally, LEAM can be used to model the impacts of land use change such as water quality, traffic congestion and air quality. The land use change model and the impact assessment models can be upgraded and improved as better information becomes available.

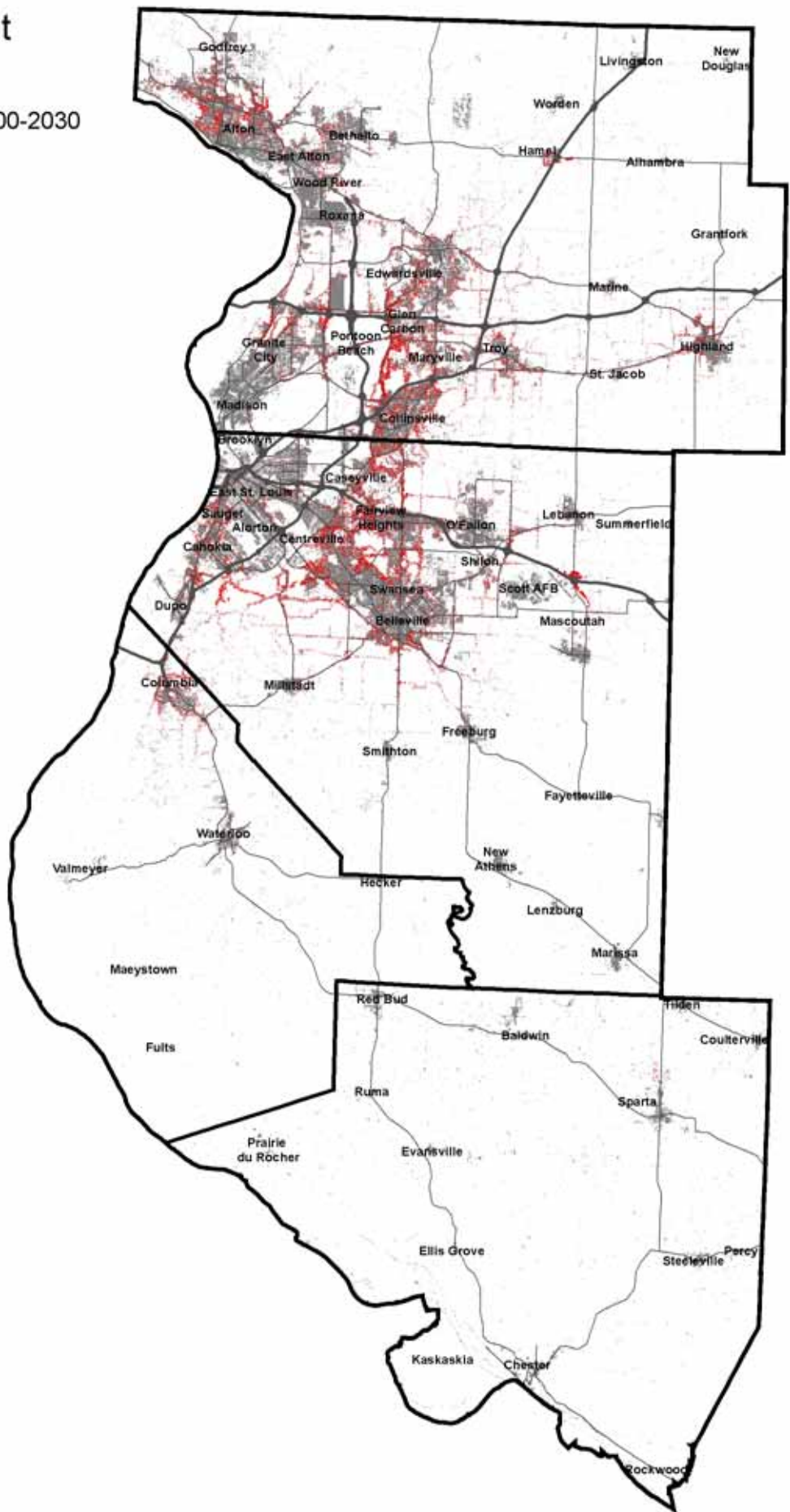
LEAM does not predict the future; it simply runs a simulation based on the data and sub-model information that is fed into it. Changing inputs, sub-models or weighting schemes results in different outputs. A proposed policy or scenario can be used as an input for the model, and the results can be compared with a “business as usual” output to determine the potential impact of the proposed scenario. For this Resource Plan, a “business as usual” scenario called the Blueprint Model (bpLEAM) was used. Other “what if?” scenarios (Long Range Transportation Plan build out, Scott Air Force Base closure, etc.) have been developed and could be used for similar analysis. The bpLEAM scenario was calibrated using trends in land use change through 2000 and assumes that those trends will continue over time. Changes in development trends since 2000 are not factored into the model. For more information: <http://www.lead.uiuc.edu>

Because the LEAM project area does not extend to Randolph County, an alternative method of projecting growth had to be developed for this Resource Plan. A variety of development simulation tools are on the market, but limitations such as high cost, unavailability of required data inputs and lack of computer programming skills made it unrealistic to use any of them as a substitute for LEAM. Fortunately, Randolph County has an excellent resource for projecting development and land use change; Mr. Ed Crow, the Director of Economic Development, who has more than twenty years of experience with the county. Using a paper map, he identified areas within the county that are likely to develop over the next twenty-five years. The areas indicated by Mr. Crow were then converted to digital data for use in this Resource Plan.



Projected Development

- Developed, 2000
- Projected development, 2000-2030
- Major Road



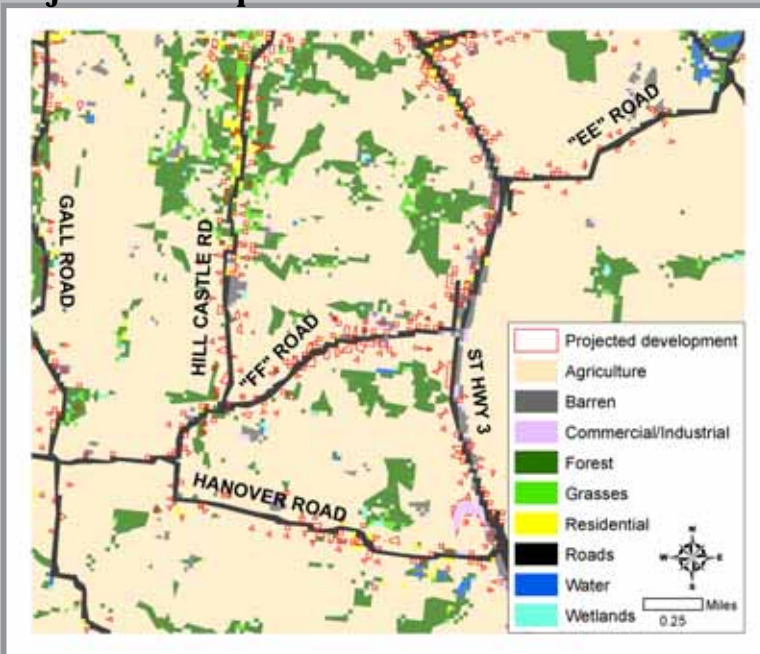
Analysis

This Resource Plan includes many pieces of information that can be compared and analyzed to address planning issues. The examples of analysis in this document are intended to illustrate the potential of this Resource Plan as a dynamic tool for planning, but many other kinds of analysis are possible. Plans, resource data layers and growth projections can be compared in a multitude of ways, depending on the issue at hand. In developing these examples, a question-and-answer approach was applied. A question is posed and then the relevant data layers were analyzed in GIS using overlay methods. This approach is an effective method for addressing questions that may arise during a planning process.

What land cover types will be impacted the most by future development?

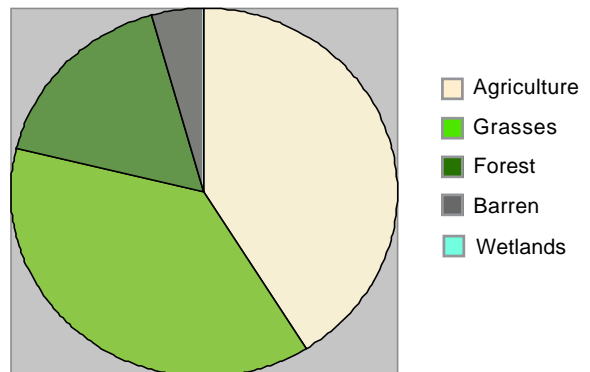
This question can be answered by comparing the 2000 Land Cover data with the development projections. The areas that are projected to develop can be isolated and the number of acres of each land cover type can be calculated. While this should not be considered an absolute prediction of the future, it can assist planners and resource managers in making decisions and prioritizing resources for protection. This analysis revealed that **agricultural land** has the most acres projected to develop by 2030, with more than 11,600 acres in the four-county area. Grasses (includes grasslands and urban/recreational grasses) have the second highest acreage, with more than 10,600 acres projected to develop. Forest lands rank third, with 4,700 acres projected to develop.

Projected Development and Land Cover



This area in Monroe County between Columbia and Waterloo shows a bpLEAM projection for development through the year 2030 as an overlay on the 2000 Land Cover dataset. This approach was used to determine how many acres of each land cover type were likely to be converted to Residential or Commercial/Industrial use based on the development projection.

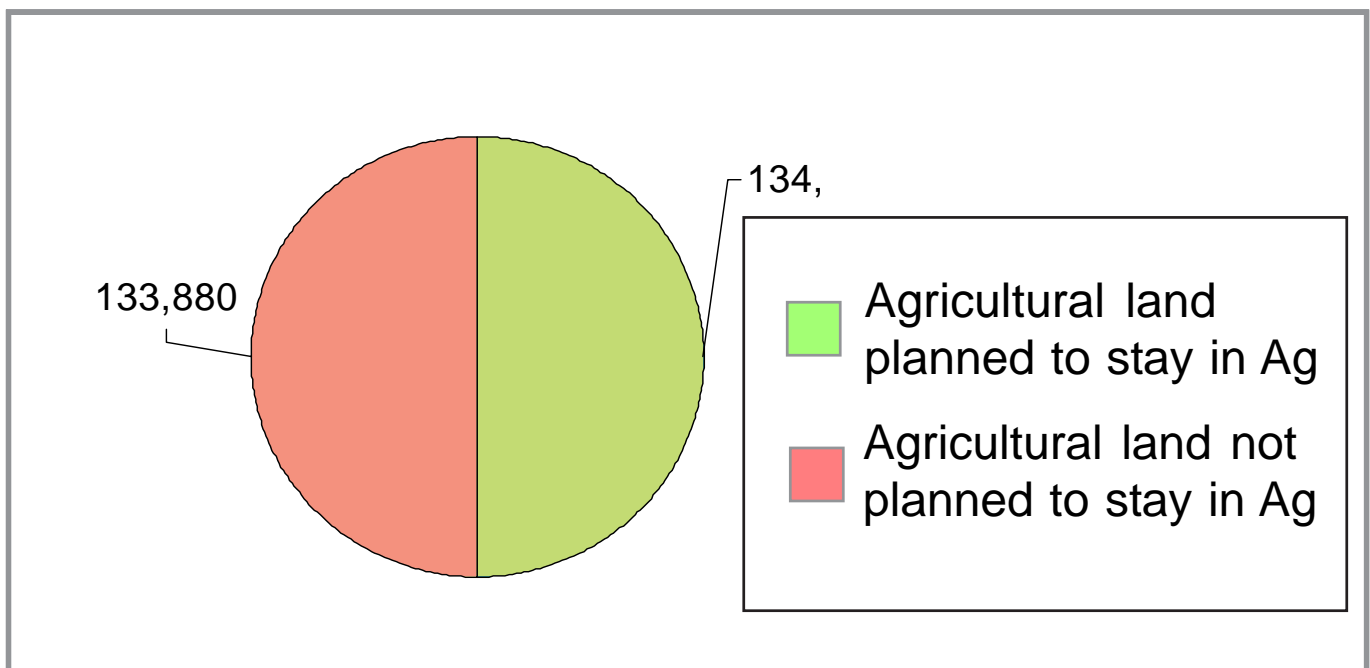
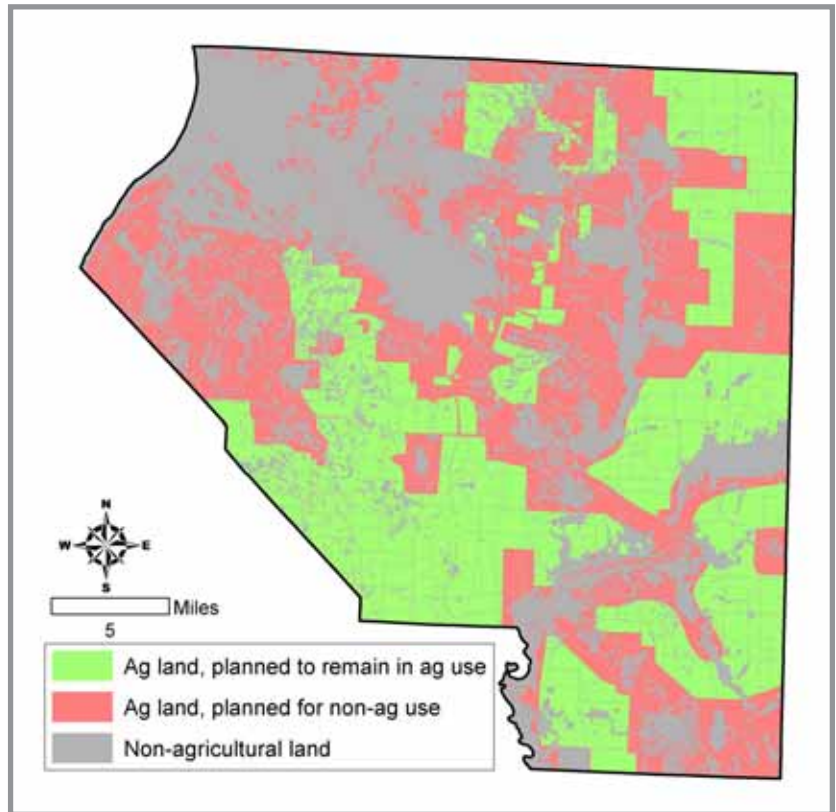
	Madison	St. Clair	Monroe	Randolph	Total
Agriculture	5,790	5,140	650	60	11,640
Grasses	5,490	4,950	210	20	10,670
Forest	2,320	2,270	110	10	4,710
Barren	500	600	110	0	1,210
Wetlands	20	10	1	1	32



How many acres of farmland are planned to be developed in St. Clair County?

To answer this question, information was queried from the system of plans and from the 2000 land cover data for St. Clair County. Areas delineated for agricultural (or “non-urban”) use were selected out of all the future land use plans compiled for this Resource Plan. These plans include several community plans as well as the 1991 St. Clair County plan. The areas planned for agriculture were combined into a single layer and compared to agricultural land from the 2000 land cover data. This comparison shows where existing agricultural land is planned to remain in agricultural use or planned for non-agricultural use. A calculation of the acres of agricultural land that are planned for non-agricultural use reveals that **133,830 acres – almost half of the agricultural land in St. Clair County** - is planned to be converted to non-agricultural use. This analysis is based on a composite of several different plans developed over a range of years with varying timeframes, so the date by which this is planned to occur should be estimated as 2030 or sooner.

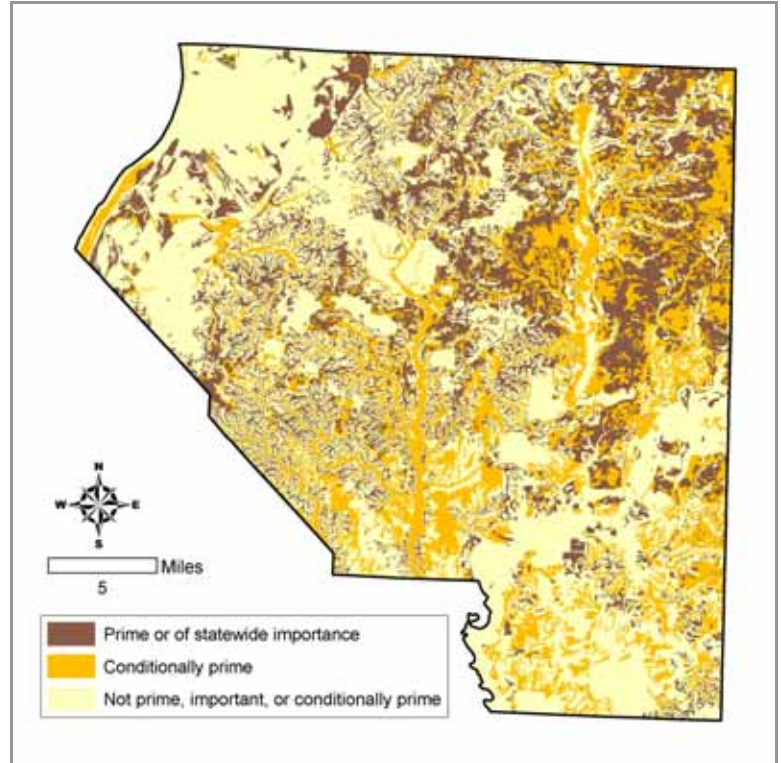
St. Clair County Planned Land Use for Agricultural Land



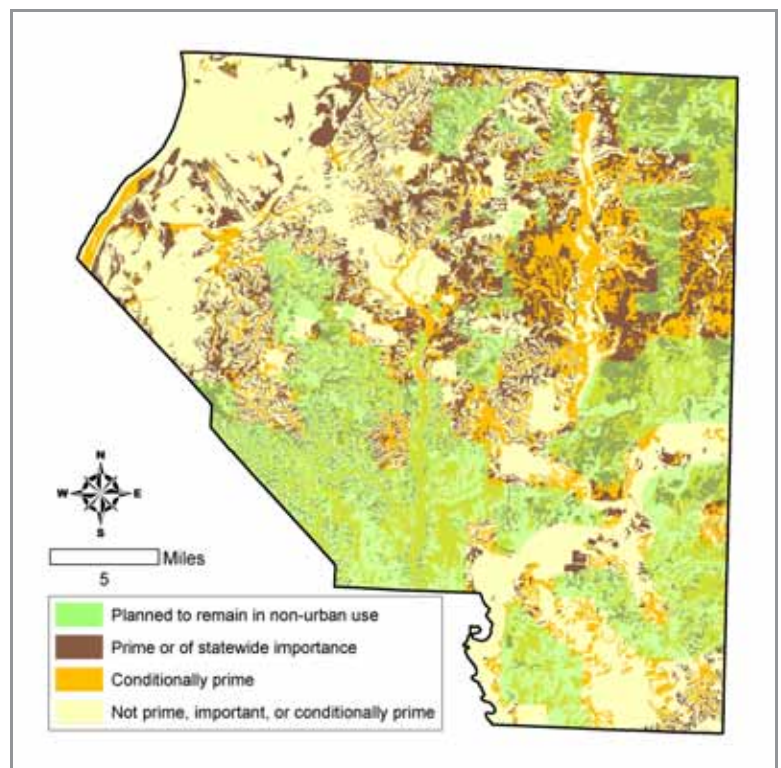
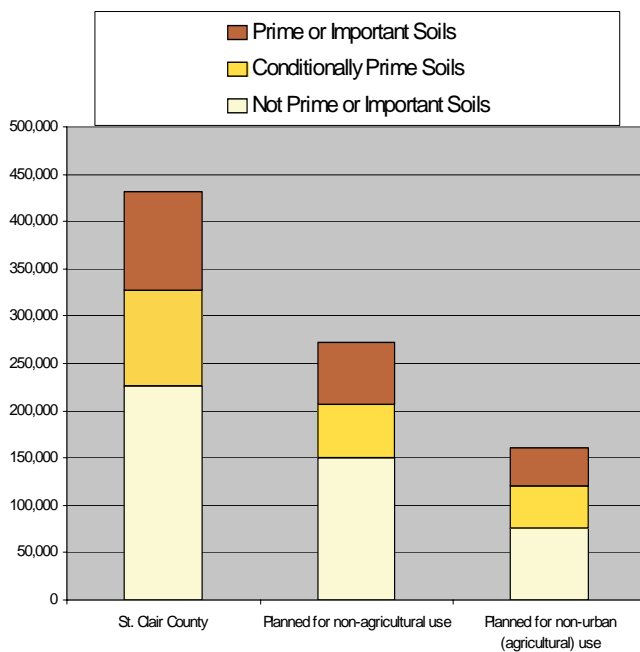
How many acres of Prime Farmland are planned for non-agricultural use?

This question can be answered using digital soil survey data and the system of plans. The digital soil surveys (SSURGO) include a table that identifies soil types for each county that are “Prime farmland”, “Farmland of statewide importance” or conditionally prime farmland (prime if drained, prime if protected from flooding, etc.). For this analysis, “Prime farmland” and “Farmland of statewide importance” are combined to represent the most desirable soils. Conditionally prime soils are included in a separate category because there is no data to indicate which areas have met the conditions (have been drained, have been protected from flooding, etc.) to be considered “prime”. Comparing the prime and important soils with future land use plans shows that **64,200 acres or 62% of the best soils in St. Clair County are planned for non-agricultural uses.**

St. Clair County Prime Farmland



St. Clair County Planned Land Use for Prime Farmland

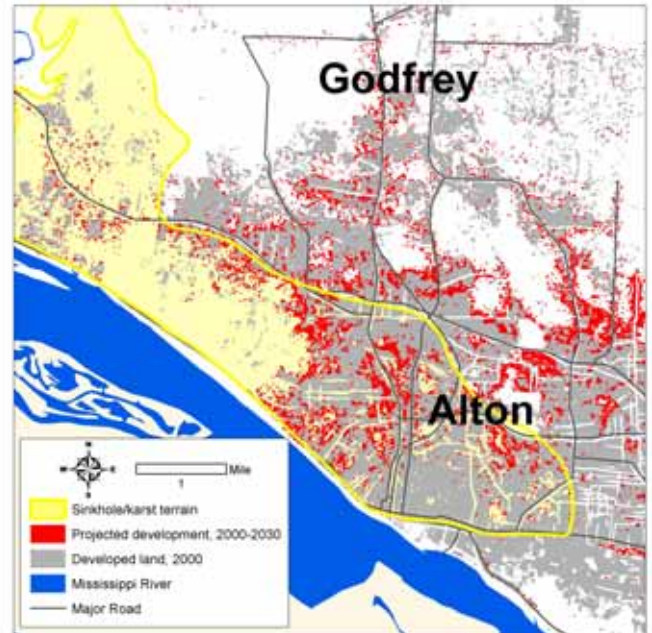


How much development is projected to take place on Karst Terrain?

A simple comparison of projected development and the sinkhole/karst data layer reveals that **more than 1,400 acres of karst terrain are projected to develop by the year 2030**. A similar analysis could be used to look at Facility Planning Areas that encroach on karst terrain.

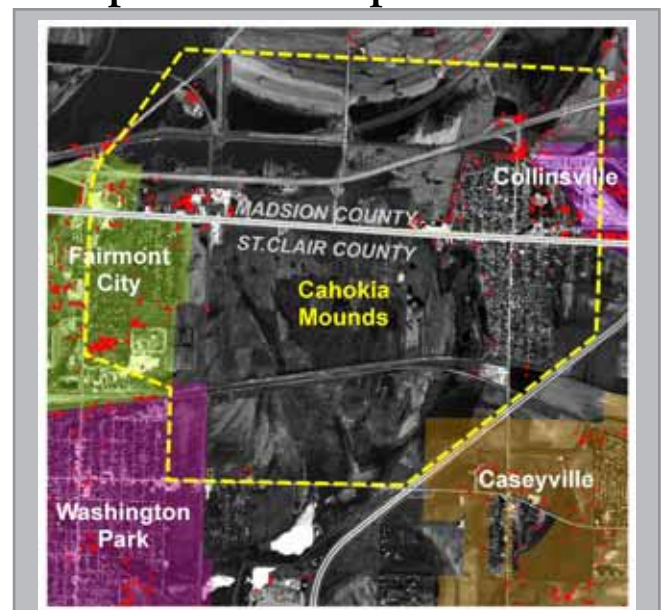
	Acres of projected development on karst terrain	Acres of karst terrain	Percent of karst projected to develop
Madison	783	8,697	9.0%
St. Clair	476	12,978	3.7%
Monroe	183	73,395	0.2%
Randolph	0	17,728	0.0%
Total	1,442	112,798	1.3%

Projected Development on Karst Terrain



Are there historic features in the path of development?

This question is best answered by visual comparison of historic feature data layers and development projections. Comparing growth projections with individual structures should be done with the understanding that the outputs of bpLEAM include a built-in degree of “randomness”. This means that if two pieces of land are subject to the same factors that propel them toward development in the model, one may change and the other may not – it is a random choice. At the detailed level of analysis that is necessary to compare individual historic features, this randomness may make the development projections misleading. The development projections are still useful for identifying historic structures that may be facing development pressure, but they should be used as generalized indicators for an area rather than rigid, structure-specific predictions. Historic districts, especially the two large ones in the Resource Plan area (Cahokia Mounds and French Colonial), are more suitable for using GIS analysis methods.



Projected Development in the Cahokia Mounds Historic District

The Cahokia Mounds Historic District extends beyond the boundaries of the state-owned property into the surrounding communities. Cooperation among the municipalities is necessary to ensure that this World Heritage Site remains in an acceptable landscape context.

Strategies and Tools

Agricultural

USDA-NRCS Farm and Ranch Lands Protection Program

The Farm and Ranch Land Protection Program provides matching funds to help purchase development rights to keep productive farm and rangeland in agricultural uses. Working through existing programs, the U.S. Department of Agriculture partners with State or local governments and non-governmental organizations to acquire conservation easements. USDA provides up to 50 percent of the fair market easement value of the conservation easement. For more information: www.nrcs.usda.gov/programs/frpp/

Preservation agreements for working farms

Agricultural conservation easements are voluntary legal agreements designed specifically to protect farmland from development. Landowners retain the right to use their land for farming and other purposes that do not interfere with or reduce agricultural viability. They continue to hold title to their properties and may sell, give or transfer their property as they desire. Agreements are created between private landowners and qualified land trusts, conservation organizations or government agencies. The agricultural easement remains with the land after it is transferred to a new owner. The land trust, organization, or agency that entered into the agreement is responsible for making sure that the agreement is not violated. Landowners can receive federal tax benefits such as estate tax reductions and charitable gift deductions. Property tax assessments may be reduced as a result of donating easements. For more information, contact Steve Black at The Land Conservancy, (618)566-4451 or www.farmland.org/farmlegacy/easements.htm.

USDA Programs

There are many programs available through the U.S. Department of Agriculture to assist farmers with maintaining profitable agricultural enterprises while conserving natural resources. These programs range from the Conservation Reserve Program to the Conservation of Private Grazing Lands Program, and include cost-share, technical assistance, services for rural areas, and much more. See also “USDA-NRCS Conservation Programs” in the Natural Resource Strategies section of this document. For more information: www.usda.gov

Agricultural Conservation and Protection Areas

Under the Agricultural Areas Conservation and Protection Act (505 ILCS 5/1 et seq.), county board members have the authority to establish Ag Areas for the purpose of protecting the local agricultural land base. Land within an Ag Area is protected from locally initiated projects that would convert the land to other uses. Landowners with property enrolled are exempt from local laws that would unreasonably restrict normal farming practices and from special benefits assessments that are not in their best interests. When property is enrolled in an Ag Area, it must remain in agricultural use for at least 10 years, unless the county board grants a landowner petition of withdrawal to remove land from the Ag Area. After 10 years, land may be re-enrolled every eight years. No land may be included within an Ag Area without the consent of the landowner. For more information: www.agr.state.il.us/Environment/LandWater/agareafacts.html

Urban service limits

While there are many names for urban service limits and many variations on their specifics, the goals are the same: reduce the costs of infrastructure, protect rural resources, and keep development compact. The careful planning and phasing of municipal infrastructure extensions can reduce costs and protect agricultural areas from development pressure. Extending water and sewer services to contiguous land is much more cost effective than allowing haphazard “leap-frog” extension of services. The planned, orderly extension of services allows for major infrastructure components to be placed in the most advantageous locations with more accurate estimates of future service needs. Another benefit of thoroughly planned urban service areas is that land speculation and development pressure on agricultural land are limited to the areas that are planned to receive services in the future. Excessive land speculation can drive the price of farmland out of reach for producers interested in expanding their operations and limit the opportunities for the next generation of producers. For more information: www.dca.state.ga.us/intra_nonpub/Toolkit/Guides/UrbnSrvcAreas.pdf and www.asu.edu/caed/proceedings02/DAWKINS/dawkins.htm

Large minimum lot sizes in agricultural zones

Establishing large minimum lot sizes in a municipal zoning code can discourage non-farm residential development in agricultural zones. The goal is to prevent the fragmentation of viable agricultural lands into dispersed residential parcels that are too small to farm. Property in rural areas that are inexpensive (compared to real estate prices in the metropolitan region), and easily accessed by regional transportation networks is likely to develop a dispersed pattern of country estates occupied by high-income non-farmers. This pattern speeds up the conversion of productive farmland to non-productive, oversized, residential lots. A large minimum lot size would discourage residential buyers from purchasing farmland, assuming that the price of the farm parcel is high enough to put it beyond the amount that most buyers are willing to pay for a house lot. Determining a minimum lot size should be a balance between being large enough to discourage residential development and small enough to ensure that farmers can afford to expand or start new operations. Characteristics such as soil productivity, average farm size, and farming practices in the region should be considered when setting a minimum agricultural lot size. The trend toward larger farms that take advantage of economies of scale (especially in the production of corn and soybeans that is typical in Southwestern Illinois) may indicate that minimum lot sizes need to be quite large to maintain economically viable farming operations. For more information: www.farmlandinfo.org/documents/29478/FS_APZ_9-98.pdf

Develop alternative agricultural enterprises

Niche markets and alternative agriculture can add value to existing agricultural resources. Quality farmland and proximity to a metropolitan area make Southwestern Illinois an excellent region to capitalize on state-funded research and financial assistance for alternative agricultural operations. Specialty items such as horseradish and popcorn are already being produced in this region. Aquaculture (fish farming), organic products, wineries, and apiaries (bees) are also possible enterprises. Research conducted at the Illinois State Water Survey with support from the Illinois Council on Food and Agricultural Research indicates that alternative crops such as sweet potatoes, American ginseng and lentils (among many others) are highly suitable for certain areas within this region. Loans for alternative agricultural operations are available through the Illinois State Treasurer's Office, and may cover land acquisition, equipment purchase and other start-up costs. Regional cooperation to link alternative agricultural producers with markets would help new enterprises get off to a good start. For more information: www.state.il.us/treas/Programs/agriculture.htm and www.sws.uiuc.edu/data/altcrops/

Develop AgriTourism

Southwestern Illinois has the potential to develop a strong agritourism economy, utilizing a combination of agricultural resources and a location that is easily accessed by urban populations. Expanding into agritourism gives producers additional income to supplement earnings from marketed products and brings tourism dollars to communities. Southwestern Illinois is already developing a regional identity as an agritourism destination, largely through the marketing efforts of Eckert's County Store & Farms. Eckert's is one of the most successful agritourism enterprises in the state, drawing over 400,000 visitors per year. Recent trends toward experiential tourism (participating in the customary activities of a place) may indicate potential for marketing participatory visits to working farms. Visitors who assist with farm chores have the opportunity to reconnect with the natural cycles of agriculture and develop an appreciation for the lifestyle of rural farmers. Developing clusters of related activities could extend the length of agritourism visits to the area, capturing more tourism dollars through restaurants and lodging and adding value to agricultural resources in the region. For more information: www.agritourism.uiuc.edu/atpi/HTML/references.asp or www.nrcs.usda.gov/technical/RESS/altenterprise/FirstSteps.pdf or www.nal.usda.gov/ric/ricpubs/tourism.html



Develop a tool/mechanism to identify and protect strategic farmland

While there are thousands of acres of farmland that are important to the agricultural economy, increasing development pressure necessitates the prioritization of agricultural lands and the protection of the most critical lands. Once these lands are developed, they are lost to agriculture forever. Factors such as the quality of soils, the presence of historic or cultural features, the presence of high-quality natural features and the degree of development pressure can be used to focus protection efforts on the most strategic areas of farmland. Identifying areas that contain desirable characteristics and are immediately threatened by development is an effective approach for focusing protection efforts on the most critical land. GIS software can quickly identify areas for protection based on various factors. Maryland has successfully developed and implemented an approach for the identification and protection of strategic farmland. For more information: www.planning.org/thecommissioner/19952003/winter00-1.htm

Cultural/Historic

Establish preservation ordinances

A critical part of community preservation programs are local ordinances identifying historical resources. Locally enacted and enforced ordinances are the most effective means of preserving cultural landmarks. Because they are community enacted and enforced, local ordinances can address the specific preservation needs of a city, town or county. A typical local ordinance empowers a municipal or county government to create a historic preservation commission, establish local historic districts and landmarks, review rehabilitation projects and delay or deny proposed demolition permits. A strong preservation ordinance will include a statement of purpose, provide for the establishment of a review commission, outline a process for designating local landmarks and/or historic districts, and include a process for reviewing actions affecting designated places. Many communities have ordinances establishing local incentive programs that assist owners of designated properties. Such programs include low-interest loans, grants and easements. Members of the review commission also serve as technical advisers and are available to assist property owners in following proper rehabilitation techniques. When preservation ordinances are certified by the State Historic Preservation Office, local governments may participate in state and federal incentive programs. For more information: www.state.il.us/hpa/PS/community.htm

Become a Certified Local Government through the Illinois Historic Preservation Agency

The Certified Local Government Program, which was established by the National Historic Preservation Act Amendments of 1980, gives municipalities and counties the opportunity to participate as partners in state and federal preservation activities. Municipalities and counties that have local historic preservation programs may participate after they have been "certified." To become certified, a local government must have a historic preservation ordinance, establish a preservation review commission, have an active local survey program to identify historic resources and provide for public participation. Certified Local Governments are also eligible for matching grant funds to assist in the implementation of their local preservation programs. The funds can be used for a variety of projects; including surveys, preservation plans, staff support and public education. For more information: www.state.il.us/hpa/PS/community.htm

Take advantage of assistance offered through the Main Street program

The Illinois Main Street program is a volunteer-driven, preservation-based, downtown revitalization program. The Main Street approach establishes four interdependent committees comprised of local volunteers that work in the following four key areas: design, organization, promotion and economic restructuring. Participating communities provide the funds for their local programs, each of which has a paid manager. The program is administered by the Lieutenant Governor's office. Architectural Services are provided by the Illinois Historic Preservation Agency at no cost to designated Illinois Main Street communities. There is a



range of available Architectural Services, with special emphasis on improving building facades. Services are broken into two categories: Building Services, which deal with specific buildings, and Community Services that include training, workshops, and committee consultation. For more information: www.state.il.us/hpa/PS/mainstreet.htm and 64.9.205.160/mainstreet/main_learn.php

Utilize federal historic preservation tax credits

The Federal Historic Preservation Tax Credit Program provides federal income-tax incentives for the rehabilitation of historic income-producing properties. The Illinois Historic Preservation Agency, Preservation Services division, administers it for Illinois properties. Under the provisions of the Tax Reform Act of 1986, a 20% tax credit is available for the substantial rehabilitation of commercial, agricultural, industrial, or rental residential buildings that are certified as historic. The building rehabilitation must meet the Secretary of the Interior's Standards for Rehabilitation. The credit may be subtracted directly from federal income taxes owed by the owner. For more information: www.state.il.us/hpa/PS/taxcredits.htm

Establish a state historic preservation tax credit

Missouri has developed a very successful program to supplement the federal historic preservation tax credit by establishing a 25% tax credit for historic income-producing properties. This state tax credit is used in tandem with the federal tax credit. According to the National Park Service's FY2004 annual report on tax incentives, the success of Missouri's historic rehab tax credit program "is reflected in the fact that rehabilitation using the federal tax credits doubled" after the introduction of the state tax credits. A Rutgers University study reveals that the impact of historic preservation tax credits on Missouri's economy extends far beyond the initial investment in buildings and communities. The preservation of Missouri's historic architecture is a major driver for heritage tourism in the state and a major source of new jobs and additional revenue for municipalities, counties, and the state itself. Establishing a similar state historic preservation tax credit would encourage the preservation and restoration of historic structures in Illinois. For more information: www.dnr.mo.gov/shpo/TaxCrds.htm

Utilize the property tax assessment freeze

Owners of certified historic homes who are rehabilitating their residence are eligible for an eight year freeze on property tax assessment through the Illinois Historic Preservation Agency's Property Tax Assessment Freeze Program. The assessed valuation of the qualified historic property is frozen for eight years at its level the year rehabilitation began. The valuation then is brought back to market level over a period of four years. Single family homes, condominiums, co-ops and 1-6 flat apartments where at least one unit is owner-occupied are eligible. The building rehabilitation must meet the Secretary of the Interior's Standards for Rehabilitation. For more information: www.state.il.us/hpa/PS/taxfreeze.htm

Establish local incentives for historic preservation

Local incentives are designed by individual communities to encourage specific renovation programs. They can supplement the federal tax credits and often apply to projects not eligible for the credits. Matching grants are one of the most common local incentives. Grants may be given to eligible applicants for such things as façade renovations, exterior maintenance, new signage and interior remodeling. Grants are commonly matched with private funds in the range of 20% to 50%. Low-interest loans are another common local incentive. The loans are given at a reduced interest rate, typically 2 to 5 points below prime. Low-interest loans can be given on a matching basis or have a cap on the low-interest portion. Some cities offer public improvements as incentives. For example, if a property owner invests a certain amount in a façade renovation, the city will agree to replace sidewalks, add pedestrian amenities or make improvements in the alley next to the building. For more information: www.illinoishistory.gov/ps/upperstory/topics/7_tax_incentives.pdf

Use tax incentives to offset costs for improving accessibility to historic buildings

Offsetting the cost of modifying historic buildings to meet accessibility standards can make the reuse of an older structure more feasible for small businesses. Expenses associated with improving accessibility to historic buildings can be eligible for federal tax credits or deductions. The Disabled Access Tax Credit (Title 26, Internal Revenue Code, Section 44) is a tax credit for small businesses that covers 50% of the costs of accessibility improvements.

The Tax Deduction to Remove Architectural and Transportation Barriers to People with Disabilities and Elderly Individuals (Title 26, Internal Revenue Code, section 190) allows a deduction up to \$15,000 per year for qualified architectural and transportation barrier removal expenses. Expenditures to make a facility owned or leased in connection with a trade or business more accessible to, and usable by, individuals who are handicapped or elderly are eligible for the deduction. For more information: www.eeoc.gov/facts/fs-disab.html

Preserve historic agricultural buildings

In addition to being symbols of the cultural lifestyles of earlier generations, barns and outbuildings tell a unique story of our agricultural history and heritage, and provide a visual account of rural life. They have become an integral part of our agricultural scenic landscape and are especially important in Southwestern Illinois where agriculture has traditionally been, and continues to be, an industry of economic importance. Establishing a cost-share program to assist owners of historic barns and outbuildings would help owners maintain these cultural icons of the rural landscape. New York has established a Barns Restoration and Preservation Grant Program providing cost-sharing for up to 90% of the project cost. For more information: nysparks.state.ny.us/grants/programs/barns.asp

Extend preservation efforts to historic landscapes and roads

Southwestern Illinois has played many important roles in history, from ancient cultures, to westward expansion, to the days of Route 66. Efforts to identify and preserve buildings and sites are only part of the story. Many important links to culture and history are much larger than a single building. Landscapes, networks or clusters of sites can often tell a more complete story about a time and place than a single buildings. Large-scale historic attractions are also easier to market and more likely to become tourism destinations. For more information: www.cr.nps.gov/hps/hli/hli_p.htm and <http://www.historicroads.org/index.htm>

Encourage the use of quality construction materials and durable designs

The diverse range of building types and styles that are being preserved today are the result of more than one hundred years of construction that was “built to last”. However, the advances in materials and techniques that make it possible for new buildings to be assembled quickly and inexpensively often sacrifice durability. Southwestern Illinois is experiencing a period of rapid growth and new construction. Which of the new buildings will be the architectural representatives of this period of history? Will any of them last long enough to be appreciated for historical value? Using durable materials and designs will help the region develop a stock of reusable, long-lasting structures that will contribute to future historic value. For more information: www.huduser.org/publications/destech/durdesign.html

Natural

USDA Conservation Programs

The U.S. Department of Agriculture’s natural resources conservation programs help people reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters. Public benefits include enhanced natural resources that help sustain agricultural productivity and environmental quality while supporting continued economic development, recreation, and scenic beauty. There are many programs for private landowners, such as the Wetlands Reserve Program, Environmental Quality Incentives Program, Wildlife Habitat Incentive Program and Conservation Security Program. For more information: www.nrcs.usda.gov/programs/

Forest Legacy Program

The U.S. Department of Agriculture – Forest Service offers the Forest Legacy Program (FLP) in partnership with states to support state efforts to protect environmentally sensitive forest lands. Designed to encourage the protection of privately owned forest lands, FLP is an entirely voluntary program. FLP helps the states develop and carry out their forest conservation plans. It encourages and supports acquisition of conservation easements, legally binding agreements transferring a negotiated set of property rights from one party to another, without removing the property from private ownership. Most FLP conservation easements restrict development, require

sustainable forestry practices, and protect other values. The Resource Plan area is within the Southwestern Illinois – Lower Kaskaskia Forest Legacy Area. For more information: www.fs.fed.us/spf/coop/programs/loa/flp.shtml or dnr.state.il.us/OREP/C2000/Incentives.htm#FLP

Confluence Greenway

The Confluence Greenway is a conservation, heritage and recreation corridor at the confluence of the Missouri and Mississippi Rivers. The collaboration of citizens, public and private interests and non-profit organizations allows many projects to be planned and implemented within the Confluence Greenway. The development of environmentally appropriate park and recreation facilities, including a network of trails and greenways, is one of the main projects of the collaboration. However, a wide range of issues are addressed through the Confluence Greenway organization, including watershed and storm water management, groundwater protection and habitat restoration. For more information:

www.confluencegreenway.org



IDNR C2000 Ecosystem Partnership Program

The purpose of the Illinois Department of Natural Resources Ecosystems Program is to integrate the interests and participation of local communities and private, public and corporate landowners to enhance and protect watersheds through ecosystem-based management. The Ecosystems Program is funded through Conservation 2000 (C2000), a comprehensive long-term approach to protecting and managing Illinois' natural resources. The Ecosystems Program is a voluntary, broad-based incentive program. The Ecosystems Program is made up of Ecosystem Partnerships, which are coalitions of local stakeholders — private landowners, businesses, scientists, environmental organizations, recreational enthusiasts and policy makers. They are united by a common interest in the natural resources of their areas' watershed. Partnership designation brings financial and technical support, which is integral in addressing watershed concern. The Resource Plan area is covered by four Ecosystem Partnerships (American Bottom, Lower Kaskaskia/Silver Creek, and Kaskaskia River/Shoal Creek, Ozark Hills). For more information: www.dnr.state.il.us/orep/c2000/ecosystem/

Nature Preserves Commission

The Illinois Nature Preserves Commission assists private and public landowners in protecting high quality natural areas and habitats of endangered and threatened species in perpetuity, through voluntary dedication or registration of such lands into the Illinois Nature Preserves System. The Commission promotes the preservation of these significant lands and provides leadership in their stewardship, management and protection. Three levels of protection are available through Nature Preserves Commission programs. High-quality natural areas qualify for dedication as a Nature Preserve. Dedication is the strongest protection that can be given to land. The owner retains custody but voluntarily restricts future uses of the land in perpetuity to preserve its natural state and to perpetuate natural conditions. Lands and waters of Illinois that support significant natural heritage or archaeological resources qualify for registration as an Illinois Land and Water Reserve. The agreement to register an area determines allowable uses and stipulates management objectives. Registered Reserves may be in public or private ownership and agreement may be for a term of years or permanent. The Natural Heritage Landmark is a recognition program that introduces a landowner to the concept of natural area protection and allows the state to assist with management of the natural area. It is a voluntary program that increases understanding of the value of natural areas and encourages their preservation by private landowners. An agreement document determines

provisions and can be terminated by either party on sixty days notice. These three programs are designed to preserve the natural features of the land and do not require public access to private property. For more information: dnr.state.il.us/INPC/programs.htm

IDNR Open Space Lands Acquisition and Development Program

The Open Space Lands Acquisition and Development (OSLAD) Program is a state-financed grant program that provides funding assistance to local government agencies for acquisition and/or development of land for public parks and open space. The federal Land & Water Conservation Fund program (known as both LWCF and LAWCON) is a similar program with similar objectives. Both are managed in Illinois by the Department of Natural Resources with concurrent application due dates, equal grant maximums and similar general rules. Projects vary from small neighborhood parks to large county parks and nature areas. Under both programs, funding assistance up to 50% of approved project costs can be obtained. For more information: dnr.state.il.us/ocd/newoslal1.htm

Illinois Acres for Wildlife

Illinois Acres for Wildlife, a voluntary program, involves rural and urban landowners who want to help provide wildlife habitat on their property. The landowners, in cooperation with an Illinois Department of Natural Resources biologist, set goals for their land. Participants receive assistance in conserving or improving habitat and can get free tree and shrub seedlings, food patch seed mixes and help in obtaining financial assistance for habitat improvement. For more information contact your local IDNR Wildlife Biologist.

Establish or join a park district

A park district is a municipal corporation enabled by state legislation, created for the purpose of acquiring and maintaining parks. Park districts are not limited to municipal boundaries. They are governed by a board that is independent from city government. In other States, parks are usually maintained and operated by the City. In Illinois, cities and villages are authorized to maintain parks and levy taxes from the general fund to support park maintenance, but a far greater number of municipal parks are maintained and operated by park districts. Madison and St. Clair County are currently served by the Metro-East Parks and Recreation District (MEPRD) in addition to local park districts. Monroe County is eligible for inclusion in the MEPRD. For more information: www.lib.niu.edu/ipo/ip780506.html and www.meprd.org/legislation.htm

Establish a Conservation District (separate from Soil and Water Conservation District)

According to the Illinois Conservation District Act (70 ILCS 410/), a conservation district is a special district whose purposes include the acquisition of land by purchase, lease, gift or easement; the preservation and maintenance of wild land, other open land, scenic roadways and pathways; and the holding of such real property, with or without public access for the education, pleasure and recreation of the public or for other open space values. To date, five counties in Illinois have created such districts. For more information: www.lib.niu.edu/ipo/ip721114.html

Establish a Forest Preserve District

A forest preserve district is a local, property tax-supported government agency enabled by the Downstate Forest Preserve District Act (70 ILCS 805/). The purpose of a forest district is to protect and preserve the flora, fauna, and scenic beauties within the district, and to restore, restock, protect and preserve the natural forests for the education, pleasure and recreation of the public. Forest Preserve Districts operate within a single county boundary and are charged with the stewardship of forest preserves. Forest Preserve Districts may acquire forested land or acquire land to restore to forest or other natural conditions. For more information: see the Downstate Forest Preserve District Act (70 ILCS 805/)

Cluster/conservation subdivision design

Developing new subdivisions with designs that incorporate natural resource protection concepts is one approach to balancing development and resource protection. Updating subdivision regulations to allow the flexibility in lot sizes and arrangements necessary for conservation design is an important . Cluster or conservation designs for subdivisions include large open spaces (40% or more) and are laid out based on an evaluation of the existing

natural resources on a site. After the site has been inventoried, some areas designated for resource protection, and others are designated for development. The development areas are divided into the same number of lots that would have been allowed under traditional regulations. For example, a 200 acre subdivision zoned for one unit per acre would allow 200 units. Traditional subdivision regulations would require minimum lot sizes, uniform road frontage and lot setbacks, specific road standards, and other standard requirements. Under conservation design, the same 200 acre development would preserve at least 80 acres of natural resources (forest, stream corridor, unique habitat, etc.) while putting the 200 housing units on the portion of the property that has not been identified for natural resource protection. The preserved open space is usually owned by a homeowners group with a preservation agreement held by a land trust. With smaller lots in more compact arrangements, the costs of infrastructure could be much lower. Conservation design gives homeowners access to high-quality open space, so the lots command a premium price despite the small size. For more information: www.urbanext.uiuc.edu/lcr/LGIEN2000-0010.html and www.countrysideprogram.org/

Community Foundations

Community foundations are charitable organizations that make grants in a specific community or region. Funds are derived from philanthropic donors and are pooled to create endowments that generate income from interest and investments. The income is then used to fund grants for projects within the community. Donors may specify a certain area of interest that their charitable gift should be put toward or funds may be distributed to projects at the discretion of the directors of the foundation. Several community foundations are active in Southwestern Illinois, including the Illinois Clean Energy Community Foundation, Greater Edwardsville Area Community Foundation, Greater St. Louis Community Foundation, and others. For more information: www.communityfoundationsofillinois.org/

Preservation agreements for forestland or other natural resources

Landowners who wish to preserve natural resources on their property may arrange to protect their land through a conservation easement. Agreements are created between private landowners and qualified conservation organizations, government agencies or land trusts. A land trust is a nonprofit organization that works to conserve land through conservation easement acquisition or by its stewardship of such land or easements. The owner continues to hold title to the property and may sell, give or transfer their property as they desire. The conservation easement remains with the land after it is transferred to a new owner. The land trust, organization, or agency that entered into the agreement is responsible for making sure that the agreement is not violated. Landowners can receive federal tax benefits such as estate tax reductions and charitable gift deductions. Property tax assessments may be reduced as a result of donating easements. For more information: contact Steve Black at The Land Conservancy, (618)566-4451 or [www.swircd.org/pdf/Pursuing Conservation Easements.pdf](http://www.swircd.org/pdf/Pursuing%20Conservation%20Easements.pdf)

Credits for environmental benefits

Marketing credits for environmental benefits is one way for landowners to receive economic benefits in exchange for protecting or enhancing natural resources. The concept is based on the idea that natural systems perform services that cleanse the environment and that pollution can be mitigated by enhancing natural systems. The quantity of a substance processed or treated by a natural system is calculated, and the amount of a substance generated by an industrial process is calculated. Industries that produce emissions beyond established thresholds can then purchase credits for natural resource mitigation in a volume equal to the excess pollution. The purchase price of the credits funds the enhancement of the natural resource that performs the service. For example, an industry that releases excessive amounts of carbon dioxide into the air can purchase credits that fund the planting of trees. As the trees grow they absorb the carbon dioxide from the atmosphere and convert it to biomass through natural processes. The carbon pollution is mitigated by the absorption of the trees, at the expense of the polluting industry. This market-driven approach provides economic incentives for the reduction of industrial pollution for the enhancement of natural resources. For more information: www.epa.gov/sequestration/index.html and www.epa.gov/owow/watershed/trading/handbook/index.html

Planning

Develop regional plans for resources with regional benefits (agriculture, greenways, etc.)

There are several resources in Southwestern Illinois that provide regional benefits and require the cooperation of regional decision-makers to continue providing those benefits. Some regional resources, such as the agriculture industry, may seem too vast to be damaged by any one policy. However, agriculture relies on a complex system of resources, markets, services and people. A critical mass of producers is necessary to support the equipment dealers, service providers and market facilities that make farming economically feasible in Southwestern Illinois. Disregarding regional resources in local planning decisions may eventually undermine and fragment the resource to the point that it is no longer viable in the region. Similarly, the plants, animals and natural systems of this region will benefit from a regional approach to conservation. Preserving blocks of natural landscape within a network of natural corridors is essential for connecting plant and animal populations to maintain genetic diversity. These corridors and preserved areas can also provide a recreational amenity for human populations. For more information: www.trailsandgreenways.org/resources/benefits/topics/tgc_benefits.pdf

Use GIS for developing/updating plans

GIS is an ideal tool for developing plans that accurately incorporate the many factors that influence land use planning decisions. Simple overlay analysis of factors that limit development (flood zones, steep slopes, etc.) is only the tip of the iceberg. GIS allows the efficient analysis and display of linked geospatial and tabular information and the evaluation of multiple proposals. For example, when considering locations for a new public transit hub GIS software can calculate the number of people with certain characteristics (from Census data) within a specified distance of the proposed locations and then generate detailed tabular reports comparing the options. Similar methods can be applied to identify sites for new schools, parks, commercial areas, or community facilities. GIS can also be used in the public input process of developing plans to present visualizations and build-out analyses to the public and to quickly incorporate changes in response to feedback. For more information: www.esri.com/industries/planning/index.html and www.placematters.com

Adopt Land-Based Classification Standards

The American Planning Association has developed a standard land classification system that uses GIS capabilities to provide a more complete land inventory and planning tool. The Land-Based Classification Standards (LBCS) model is a consistent framework for classifying land uses based on a variety of characteristics. The database functionality of GIS allows a single parcel to be linked to information about the multiple dimensions of land use such as activities, functions, building types, site development character and ownership constraints. Once the parcels are coded with LBCS, a wide range of visual representation and analysis functions are possible. For example, instead of simply being identified as residential land use, parcels can be identified and displayed by the “site development” attribute, which differentiates built-up sites, sites that have been graded and sites that remain in a natural state. The standardization of parcel coding would allow seamless display of information for multiple municipalities, resolve issues with conflicting classification systems and streamline the incorporation of annexed parcels. For more information: www.planning.org/LBCS/GeneralInfo/

Establish complementary land uses where jurisdictions adjoin

Several communities in Southwestern Illinois have adjoining boundaries, and many more are likely to grow into each other in the next few decades. Now is the time to adopt a cooperative approach to address land use at the edges of communities. This Resource Plan has made it possible to see multiple plans on the same map. This is a useful tool for developing a dialogue between adjacent municipalities. The rapid pace of annexation (and consequently, the extension of planning jurisdictions) sets the stage for potential disagreements between communities. A cooperative approach to planning will help make better neighbors as some municipalities in Southwestern Illinois move toward the “land-locked” situation seen in St. Louis County and suburban Chicago.

Establish intergovernmental agreements for municipal boundaries, shared resources, etc.

The Illinois Municipal Code empowers local governments to establish agreements between municipalities that can improve regional cooperation and reduce the financial burden for providing services. A significant benefit of boundary agreements is the orderly and contiguous annexation of unincorporated land. Communities without

boundary agreements may be tempted (or pressured) to annex outlying parcels as a “land grab” to extend their planning jurisdiction. The result is sprawling municipal boundaries that reduce the efficiency of distributing municipal services. Another tool for improved regional cooperation is the use of intergovernmental agreements for sharing resources. The high costs of upgrading municipal services such as improving utility infrastructure, establishing and maintaining large parks or conservation areas, adding specialized staff positions and implementing new technology can be mitigated by establishing cooperative agreements between municipalities. Smaller communities can remain competitive with the large communities in the region by joining together to cover the costs of improving services and also by sharing amenities. For more information: Illinois Municipal Code (65 ILCS 5/11129), Intergovernmental Cooperation Act (5 ILCS 220/) and www.cgsniu.org/publications/reports/resource_sharing.pdf

