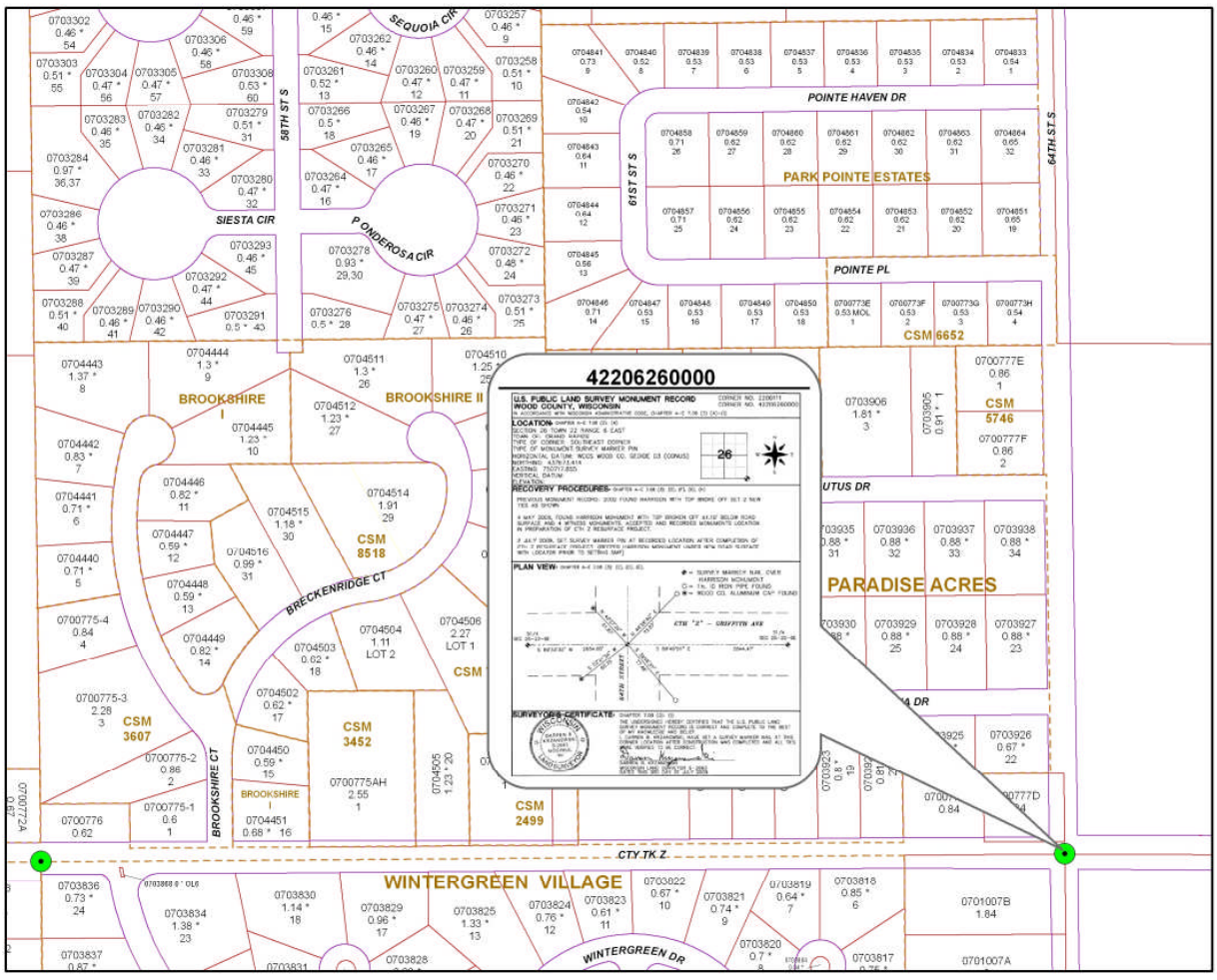
- 2010 -
County Land Information Plan
Wood County, Wisconsin



Prepared By:
Wood County Planning and Zoning Office
Wood County Conservation, Education and Economic Development Committee
(Advisory Committee of the Wood County Land Records Modernization Program)

County of Wood
1856
Planning & Zoning Office
Land Records Modernization

Good Times Are Carved In
Wood County
Wisconsin

I. EXECUTIVE SUMMARY

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Hilde Henkel, Chairperson
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C. Summary of Plan

Wood County is part of the Wisconsin Land Information Program (WLIP) and land records modernization efforts are coordinated by the County Land Information Office. The program is subject to § 59.72 and the Wood County Conservation, Education and Economic Development Committee provides oversight for land records projects and expenditures. Because Wood County is a part of the WLIP, it is required to have an adopted County Land Information Plan. This plan is to be updated at least once every 5 years or more often if necessary.

The purpose of this plan is to identify areas where land records modernization can be pursued in an effort to attain the program goals. Projects are intended to benefit operations by improving the way that land records are stored, maintained, retrieved, and used. The County is committed to sharing the benefits of modernized land records with all levels of government, customers, and agencies.

The goals of the Land Records Modernization Program in Wood County are to **eliminate or reduce redundancy** through the coordination and modernization of existing services provided by and between departments and agencies participating in the program; **Develop an efficient delivery system for products and services** offered to the public, and; **Improve the quality of products and services** offered to the public. Ways of achieving these goals are identified in the following section of this plan.

The plan is intended to outline projects that should be considered over the next 5 years. Although aggressive, it is not impossible to accomplish all of the new initiatives outlined if projects are approached through cost-sharing and cooperative efforts. Successful implementation is contingent on a variety of factors including the level of funding generated for land records modernization efforts through documents recorded in the County Register of Deeds Office. Historically the Land Records Modernization Program has operated almost entirely from funds generated by documents recorded in the County Register of Deeds Office. The allocation of tax-levied funds for projects would greatly improve the successful implementation of this plan, and in many cases the costs would be offset by long-term savings to County operations. This plan should be referenced often and updated as necessary to reflect changing needs and opportunities in land records modernization.

D. Wood County Land Information Websites

Wood County has an interactive mapping website that is linked off of the County home page. The web address is http://www.co.wood.wi.us. With this free website users can interactively view tax parcel information in relation to many other County mapping base layers including aerial photography, wetlands, hydrography, and floodplain.

The Register of Deeds Office provides access to recorded documents through for fee applications at http://www.co.wood.wi.us/departments/rod.

The County Surveyor provides access to Public Land Survey System tie sheets, elevation data, and a variety of other resources at http://www.co.wood.wi.us/Departments/PZ/LandSurvey.aspx.

The County Land Information Office provides free download of Geographic Information System data, links to municipal land records websites, and other useful links and resources at http://www.co.wood.wi.us/Departments/PZ/LandRecords.aspx.

E. Municipal Land Information Websites

The city of Marshfield and the city of Wisconsin Rapids have land information websites at the following addresses.

City of Marshfield Interactive Map – http://ci.marshfield.wi.us/PubServ/index.html
City of Marshfield Assessment Data – http://ci.marshfield.wi.us/as/property/
City of Wisconsin Rapids Assessment Data – http://wirapids.devnetinc.com/taxinquiry.pl

II. LAND INFORMATION

A. Goals and Objectives

GOAL: Eliminate or reduce <u>redundancy</u> through the coordination and modernization of existing services provided by and between departments and agencies participating in the Wood County Land Records Modernization Program.

Objective: Limit stewardship of data sets and map layers to their respective departments.

- Encourage and facilitate GIS software training so that departments can maintain their own data sets.
- Educate departments on metadata and promote the maintenance of it.
- Maintain a networked GIS server where data sets and map layers are maintained only by the appropriate departments but can be accessed by any department with need for the data.
- Implement document imaging systems in departments with land records data to facilitate information sharing, expedite document retrieval, and provide digital backup.

Objective: Coordinate Wood County efforts with those of local municipalities, private enterprises, and state and federal agencies.

- Develop data sharing agreements both formal and informal to encourage the exchange of data when possible.
- Participate in regional or state consortium projects that allow Wood County to acquire updated land records data or services, at a significant cost savings and a reduction in project management responsibilities.
- Work with agencies at all governmental levels to focus efforts to improve data that can be used to meet the needs of all users, rather than maintaining proprietary data sets or systems.
- Increase awareness of land records modernization efforts among municipalities in Wood County.
- Encourage project cost-sharing for acquisition of necessary data or services.

Objective: Foster communication among County departments that rely on land information.

- Allocate land records retained fees to projects that foster cooperative efforts among departments.
- Conduct regular review of land records workflow to determine if improvements will reduce redundancies and yield efficiencies among departments.
- Work with departments to identify land records issues and opportunities, and incorporate their ideas into the Wood County Land Information Plan.
- Continue to encourage County departments to participate in the Central Wisconsin GIS User Group meetings.

GOAL: Develop an efficient delivery system for products and services offered to the public.

Objective: Simplify departmental and public access to mapping, imaging, and tabular information available from various departments.

- Maintain the comprehensive document indexing system capable of managing all aspects of the Register of Deeds document management routine.
- Implement departmental document imaging systems that provide secure interdepartmental access to needed information, thus minimizing staff time related to data collection or analysis.
- Make public access terminals available for customers to query and view land records.
- Coordinate meetings of the Land Information Council to review the priorities, needs, policies, and expenditures of the Land Records Modernization Program, and advise the County on matters affecting land information.
- Maintain the networked GIS in which data sets and map layers are updated only by the appropriate departments but can be accessed by any department with need for the data.
- Develop the systems and data necessary to quickly and easily produce up-to-date digital or hardcopy maps for the public.

Objective: Minimize staff time necessary for data gathering and analysis.

- Provide ongoing, in-house training for staff directly involved with the GIS and land records.
- Develop standardized map and data products that are available for over-the-counter purchase, internet/intranet viewing, or download.
- Ensure that any GIS and land records management software is user friendly enough so that staff can fully utilize it for its intended purpose.
- Continue to implement document imaging projects so that digital documents can efficiently be searched and retrieved through simple queries.

Objective: Minimize the need for Courthouse visitors to search from department to department for needed information.

- Develop a system for information access that allows viewing of interdepartmental information from any terminal in the Courthouse.
- Coordinate working relationships among departments that foster cooperation and sharing of land information and data.

Objective: Minimize the need for customers to travel to the Courthouse for products and services.

- Continue to maintain and improve the web-based Wood County Interactive GIS Map, which serves tax parcel data and other base mapping layers to anyone with a computer and internet connection, free-of charge.
- Continue to evaluate the need for creating additional web-based applications that allow customers to query and view land-based records.

- Continue to allow map and data requests to be completed in digital formats.
- Continue to allow the free download of Geographic Information System mapping layers on the Wood County Land Records website.

GOAL: Improve the <u>quality</u> of products and services offered to the public.

Objective: Improve the accuracy of land ownership information, including both tabular and map data.

- Continue to maintain Public Land Survey System section and quarter section corners so that tax parcel mapping and other base mapping layers can be accurately updated, and improved over time.
- Create digital backups of all land records information to protect against catastrophic loss of hardcopy maps and digital data.
- Develop maintenance schedules that encourage timely updates of data.
- Provide metadata with all data that is distributed and shared.
- Encourage quality control processes that aid in the identification of tabular and mapping data entry errors.

Objective: Improve decision making processes by using the County Geographic Information System.

- Promote the use of GIS with other land records as a reliable and functional decision-making tool.
- Continue to improve the functionality of the Wood County Interactive GIS Map so that users can view geospatial information and land records, and perform basic spatial analysis.
- Educate users on the land records and GIS resources available and how they can be used in analysis of issues they are involved with.

    a. **Data Acquisition from state or local sources.** Most of the core data that the County relies on, and uses on a daily basis is created and maintained internally. Wood County does use and share data with surrounding counties when working on projects that are regional in nature. General data such as county boundaries, state outlines, etc. are acquired from state sources at times. Census data and the associated mapping is acquired at intervals and is made available for use to departments and customers.
    b. **Needed data.** There is currently no data that the County is aware exists and is not able to acquire. Current issues tend to focus on data that no one at any level has available, and the County would like to develop. Such data sets include digital elevation models, planimetric mapping, and oblique imagery.
    c. **Standard Industry Format.** The County uses Environmental System Research Institute's (ESRI) GIS software that works with a variety of data formats and can be used by most customers with little or no export or reconversions. ESRI is a member of the Open GIS Consortium and supports open GIS data transfer and data sharing requirements. ESRI software is the most common GIS software used in Wisconsin

and is considered the state standard. Because of the popularity of the software, there is a large user support base and data is easily exchanged among ESRI users.

d. **Geographically referencing data.** Wood County's data is based on the Wood County Wisconsin Coordinate System which is mathematically relatable to the North American Datum (NAD) 83(91) and can be geographically referenced for use by others.
e. **Data maintenance.** Wood County has established procedures that are performed on a recurring basis to update GIS datasets and other land records.

2. Description of the County's operating system environment and database design supporting the County's goals and objectives relating to land information.

The Wood County Systems Department is a service-oriented organization dedicated to supporting any systems necessary to make County government more efficient. The department staff currently consists of 9.75 employees, including 4 technical staff, 4.75 application support staff, and 1 department head.

The County datacenter includes over 40 servers, mostly running Windows 2003, which provide a wide variety of services. These include file and print servers, application servers, database servers, web servers, internet access servers, and systems management servers, among others. Out of this datacenter, services are provided to the Courthouse and information systems are made available to 9 other County sites.

The Systems Department is committed to supporting all activities of the Land Records Modernization Program and has been a reliable contributor to system development and support. In recent years the department has taken over the tasks of hardware purchasing, software installation, network administration, data security and backup.

B. Progress Report on Ongoing Activities.

The first 7 years of the Land Records Modernization Program (1991 – 1998) focused on establishing the foundation on which much of the program's future would be built off of. During this time the County purchased Geographic Information System (GIS) software, established the staff positions of the Land Information Officer, and the Geographic Information System Specialist, and began developing foundational GIS data layers. In the early years of land records modernization much of the focus was on project prioritization, needs assessments and data creation.

The subsequent 7 years (1998-2005) seemed to have many more quantifiable achievements that involved significant advances in the County Geographic Information System, including creation/acquisition of geospatial data, using modernized data for analysis and decision making, and facilitating public access to the Geographic Information Systems and other land records. The achievements can be attributed to the following: a solid land records foundation; improvements in technology; contribution-based grant funding available to fund LTE and intern staff; more acceptance of GIS and land records technology at the County/local level; and more County departments utilizing GIS for daily functions. Since 2005, much of the focus in land records modernization has been on maintaining and improving the quality of GIS information,

implementing digital imaging projects, and integrating/linking records from departments and agencies, and developing ways to improve public access to records through web applications.

Most of the projects identified in the 1998 and 2005 plans as new initiatives have been completed and new projects have been identified as new initiatives in Section C to further land records modernization in Wood County. Although the new initiatives have been given timeframes, their completion is dependant on a variety of factors. The biggest impact on the ability to accomplish new initiatives is the amount of funding that will be available for land records modernization efforts. Also, success is dependant on the amount of land records staff time that will be available and dedicated towards project management and implementation, and involvement by cooperating agencies and municipalities.

In 2010 the funding mechanism for modernization efforts through the Wisconsin Land Information Program (WLIP) was strengthened by the implementation of a flat recording fee of $25 per document. In the case of Wood County, this will increase the amount of annual funding for modernization efforts by about $48,000 to a total of $128,000 based on an average of 16,000 documents recorded annually. This increase in funding will allow modernization efforts to continue at an effective level, and to some degree make up for the loss of contribution-based funding grants, and strategic initiative grants that the WLIP no longer funds for a variety of reasons. This increase also will allow Wood County's Land Records Modernization Program to continue to be funded almost entirely through the Register of Deeds Office recording fees.

Since the inception of the Land Records Modernization Program, the goals have remained relatively the same, however the objectives have continually been updated as a means to achieve the goals. The objectives have changed from a focus on technical issues and data creation in the early years of the program to reach the program goals, to maintaining, sharing, publishing, and utilizing data for decision making in recent years. In 2010 the County formed a Land Information Council to review the priorities, needs, policies, and expenditures of the Land Information Office, and advise the County on matters affecting the Land Information Office. It remains to be seen the impact that the Land Information Council will have land record modernization efforts, but it is certain there will be broader involvement in determining the focus and direction of future land records modernization efforts.

The following projects were implemented as a result of the 2005 Wood County Land Information Plan.

Parcel mapping completion/maintenance. In 2005, parcel mapping in the Wood County was completed. Since 2005, some areas were remapped where better section control information was acquired. Through the County Surveyor's annual maintenance and perpetuation program for Public Land Survey System section corners, improved section corner information including coordinates is being acquired.

Plat book creation. In 2006 land records staff assisted with the creation of the 2007 Wood County Plat Book. The plat book was produced by a consultant and the project was sponsored by the Wood County 4-H. Land records staff provided up-to-date GIS data that was used to develop all of the mapping in the plat book. Land records staff also assisted in 2009 with the creation of the 2010 plat book.

County Surveyor website. In 2007 the land records staff created a County Surveyor website. The website provides links to a variety of resources including PLSS tie sheets, bench mark elevations, ordinances and forms. This website coupled with the County Interactive GIS Map, provides access to a wide range of land records, free-of-charge, 24 hours a day, 7 days a week.

County resource map. In 2007 land records staff created a resource map for distribution to the general public. The purpose of the resource map was to provide customers with a general multi-purpose county wide map, and information about the many attractions, and cultural and natural resources in the County.

Addressing. Since 2005, the County has acquired address information from the city of Marshfield, and created address point maps for the city of Wisconsin Rapids. Having address points improves the accuracy of mapping incoming 911 incident calls, allowing emergency personnel to locate the origin of the call more quickly. In the past few years many improvements have been made to the address database that now includes the entire County.

Wood County Emergency Atlas. In 2007 an emergency atlas was created as a reference for emergency responders. The atlas was created through a joint effort of the Wisconsin DNR and Wood County. Although the initial focus of the atlas creation was to respond to wild land fires in the southeastern part of the County, it covers the entire County and can be used in responding to any kind of emergency.

Enhanced 911 mapping. Land records staff was involved in the data creation and setup of Enhanced 911 mapping in the Wood County Shared Dispatch Center. This project was funded with a Public Service Commission grant that was made possible through a surcharge on all cell phones. As a result of this project the origin of all land line and cell phone calls are mapped to expedite the response of emergency responders.

GIS data conversion. Since 2005 most of the County GIS data has been converted from ESRI Shapefile and coverage formats to an ESRI Geodatabase. A Geodatabase is more flexible than previous Shapefile and coverage formats, and maximizes the functionality of the most up-to-date versions of ESRI ArcGIS software.

Central Wisconsin GIS User Group. In 2008 the Central Wisconsin GIS User Group was formed with the purpose of sharing experiences and serving as an educational resource. The group meets quarterly and is open to anyone with an interest in Geographic Information Systems and land records management.

Comprehensive Planning. In 2009 Wood County adopted a comprehensive plan. Much of the spatial analysis that was performed for the plan and the mapping that was included in the plan were developed with the Wood County GIS.

Surveyor Imaging. In 2009 document imaging equipment was purchased to scan documents filed in the County Surveyor's Office. The first project that was completed was the scanning of over 4000 Public Land Survey System (PLSS) tie sheets for the 2544 section corners. This project

resulted in a digital backup of PLSS section corner tie sheets, and internet access to the tie sheets through the Wood County Interactive GIS Map.

Updated snowmobile map. In the past few years the County snowmobile map has been updated annually to reflect changing routes and features. Having an updated map encourages use of the trails not only by residents, but it also draws in many snowmobilers that may not be familiar with Wood County.

Digital Orthophotography. In 2005 and 2010 Wood County contracted for digital orthophotography. The orthophotography provides an updated view of the landscape that is used to update many GIS data layers. The photography is also a GIS layer that the general public can easily understand and relate to, and use for any number of applications. The County is on a 5-year cycle to acquire digital orthophotography, making 2015 the next year for acquisition. As the orthophotography becomes outdated, its value changes from providing an up-to-date view of the landscape, to serving as a historic snapshot of the landscape.

Private Onsite Waste Treatment System (POWTS) Georeferencing. Prior to 2007 Wood County did not include unpermitted POWTS in the County maintenance program. In 2005 and 2006 all properties that had substantial improvements that likely included a POWTS were inventoried. Much of the initial identification of these properties was performed using the County GIS and a variety of base layers including aerial photography and tax parcels. Following verification of the presence of a POWTS that in many cases included a site visit, these properties were included in the maintenance program starting in 2007.

Web Mapping Application Update. In 2010 the Wood County ArcIMS web application was replaced with an ArcServer application. The transition was made to take advantage of improved functionality of the ArcServer software while maintaining ease-of-use of the application. The Wood County ArcServer application is better known as the Wood County Interactive GIS Map and Property Tax Data application. Anyone with an internet connection can find the web page linked off of the Wood County home web page, and use the site free-of-charge. In recent years there has been an increase in the number of users of this application, by residents, real estate professionals, developers, County departments and all levels of government agencies. Recent modifications to the application have improved accessibility to open land records, and elevated the quality of customer service the County provides.

C. New Initiatives.

1. Proposed projects.

Imaging of historic aerial photography. Even though 2005 was the first year that the County contracted to purchase county wide aerial photo, there are many flights that state, federal, and local government purchased prior to 2005, in some cases dating back to the 1930's. Most of the earlier flights are still available in hard copy format by the government agency that commissioned the work, or a custodian, but are not readily available or easily attainable. The historic photos provide snapshots of the landscape over time. Collectively, the historic photos tell a story about how land use has changed over the years in Wood County. In an effort to preserve the imagery and make it more readily available to the public, selected series of photos should be scanned and orthorectified and served to the users on the County Interactive GIS Map. Arguably, some of the historic aerial photography of Wood County is more valuable now than it was when it was first acquired.
Timeline: 2012 – 2015

Mapping and data requests. Numerous requests for mapping and data occur on a daily basis and the County should maintain its ability to complete requests in a timely manner.
Timeline: Ongoing

Digital Orthophotography. Wood County acquired digital orthophotography in 2005 and 2010 through regional/state consortium projects. The County is currently on a 5-year cycle to acquire new orthophotos with 2015 being the next year for acquisition.
Timeline: 2015

Awareness of land records modernization. Land records modernization efforts have improved the usability and accessibly of records that the County is responsible for maintaining. Many of the projects that have been completed in the past are low-profile and the public is generally not aware that they are taking place. In order to maximize the benefits of the projects that have been completed, efforts need to be made to educate the public on the progress that is being made, and how they can benefit from the improvements. To the end user, land records modernization projects have resulted in quicker and easier access to records, better record retention, and a reduction in document processing costs. More awareness of modernization activities would especially benefit local units of government that rely heavily on having access to records the County is responsible for maintaining.
Timeline: Ongoing

Update Wood County Resource Map. In 2007 the County created an updated resource map for distribution to the general public. The purpose of the resource map was to provide customers with a general multi-purpose county wide map, and information about the many attractions, and cultural and natural resources in the County. The resource map should be updated often enough to reflect changes in cultural and natural resources that are open/available to the public, as well as changes such as road alignments or redesignations. In 2011 and 2012 US Highway 10 will be realigned and improved and as a result the naming and designation of many roads will change. By 2013 the County should have an updated resource map to reflect changes that take place as a result of the US 10 Project.
Timeline: 2012-2013

ArcServer web application development. Wood County reached a milestone in early 2005 with the release of its GIS parcel search application. The GIS based search application was a combined effort of Land Record's and System's staff, with assistance of a consultant. Since 2005 web-based mapping for has grown in popularity, and is a tool that has a diverse user base. In 2009 an updated web-based application was released and built in-house by the County GIS Specialist. The new application is built with ArcServer software is more powerful, has added features, and is customizable to meet the needs of the County. Improvements will be made to the website in the future.
Timeline: Ongoing

National Agricultural Imagery Program (NAIP). Annually the USDA Farm Service Agency conducts mid-summer flights for crop assessment and program compliance. As the quality of this flight increases over time, the County will consider purchasing it in a digitally georeferenced format to be used in forestry, planning, and land conservation applications.
Timeline: 2012-2013

PLSS Maintenance Program. In the past, maintenance of the Public Land Survey System (PLSS) in Wood County was done township by township, with many of the more accessible corners being better and more frequently maintained. In 2009 all tie sheets were scanned and indexed, and as a result, a status map showing when section corner maintenance was last completed was produced. The resulting status map makes it possible for a more efficient maintenance program in the future, ensuring that it will be completed in a more equitable and consistent fashion. In 2010, 340 corners were maintained, and section summaries were completed in areas where 2 or more adjacent corners were maintained. Ongoing maintenance of the PLSS will be completed with a planned, long-term program, rather than a year-to-year approach. The goal of PLSS maintenance program is maintain each corner every 10 to 15 years, depending on location, condition, and other significant factors.
Timeline: Ongoing

Improve Surveyor records. The Wood County Surveyor's Office provides residents, survey professionals and other interested parties, access to all survey records. Progress has been made in improving organization and completeness. A variety of initiatives are proposed to improve access to records and create backups that can be used for disaster recovery. The most notable project includes indexing survey information that is organized into file folders by PLSS township, range, and section. Following indexing, and organization of each township, range, section folder, the contents of folders will be scanned and georeferenced so that they can be viewed by the public via the Wood County Interactive GIS Map.
Timeline: 2011-2015

Oblique Imagery. In recent years there has been a significant amount of interest in and support for oblique aerial imagery in Wood County. Most of the interest has been from law enforcement agencies and emergency responders, but the use and benefits of this kind of imagery is very broad and would benefit a number of functions of government agencies, the private sector and the general public. Wood County does feel there is justification for investment in oblique aerial imagery, however, acquisition will likely be contingent on cost-sharing to cover the cost of this project.
Timeline: 2012 - 2015

Register of Deeds document imaging. In 1999 the Register of Deeds Office implemented document imaging. As a result, all documents recorded since 1999 have been scanned and indexed, and are more readily available to the general public. Scanning documents and having backups stored off site ensures that there will always be a backup in the event of a catastrophic event. In addition, when the documents are scanned, they can be made available to the public via internet connection for a fee. In 2010 Wood County initiated a 4-phase project to scan all pre-1999 documents. The project is scheduled to be completed by 2014.
Timeline: 2010-2014

Planning and Zoning document imaging. Wood County issues sanitary permits for installations of Private Onsite Waste Treatment Systems, shoreland zoning permits, and floodplain zoning permits. Currently these permits are filed in the Planning and Zoning Office. The staff will begin scanning permits so that digital images can be created to serve as a backup in case the Courthouse is damaged or destroyed. Once the permits are scanned it will be more efficient to view them, make digital copies or hard copies of them for customers, and possibly allow customers to view them via a web portal.
Timeline: 2011-2015

Light Detection and Ranging (LIDAR). LIDAR technology is likely the most cost-effective means of improving elevation information county wide. Improved elevation information can be used to construct more accurate floodplain mapping in the future and manage drainage and stormwater. With 25% of the County being in the 100-year floodplain, it is important to map the boundaries as accurately as possible, so that property owners will know with a high degree of confidence, whether or not they are in the floodplain. The future acquisition of LIDAR will be dependant on available funding and possible cost sharing of the project.
Timeline: 2015

Parcel Identification Numbering (PIN). Parcel mapping has been completed for the entire County with the exception of the city of Marshfield. The city of Marshfield initially completed their parcel mapping internally and keeps it up-to-date with regularly-scheduled maintenance. Implementation of a parcel identification number system that serves as a geo-locator for parcels will be easily attainable. The system will be designed according to the WLIA Parcel Geo-Locator Standard. The standard allows parcels to be geographically located by the PIN, and improves effective data exchange.
Timeline: 2013-2014

Continuity of government. In a post 9-11 world, more time and attention is given to GIS and land records and the role they play in disaster planning and recovery. Although some consideration has been given to how to get a functioning GIS in place following a natural disaster or a terrorist act, nothing has been implemented. In the next few years more time and resources will be allocated towards implementing a plan that considers the hardware, software, data, and human resources necessary to get a functioning GIS in place following a catastrophic incident to the Wood County Courthouse where all of the components are currently housed.
Timeline: 2011-2015

Land records workflow analysis. Land records are maintained by many County departments and processing and maintenance need to be coordinated. Through workflow analysis the quality and efficiency of uncoordinated land records activities can be improved.
Timeline: Ongoing

Linking Register of Deeds records to parcel mapping. By 2013 most of the documents in the County Register of Deeds Office that pertain to land transactions and ownership will be in a digital format. When in a digital format they will be accessible through the Register of Deeds web page through programs called Laredo or Tapestry. Currently, documents that were recorded following 1999 can be accessed for a fee through Laredo and Tapestry, and for-fee access is anticipated to continue in the future. The County Interactive GIS Map and Property Tax Data web page shows property ownership resulting from legal instruments such as deeds recorded in the County Register of Deeds Office. There is a direct relationship between many recorded documents and property ownership boundaries that are represented in the County Interactive GIS Map and Property Tax Data web page, however there is no direct link at this time. In the future, this link will be established to make it easier for recorded documents to be identified utilizing the County GIS.
Timeline: 2013-2017

1. **Assistance Requested**.
   a. **Technical Assistance.** Technical assistance that is used to carry out the Land Information Plan comes from a variety of sources. Wood County staff relies on assistance from consultants, other government agencies, and other land records professionals whenever necessary. The Land Records staff consists of the Land Information Officer and one GIS Specialist.
      i. WLIP educational opportunities. Wood County would like to see the WLIP continue to provide high quality, pertinent educational opportunities for participants in the program. The WLIP's reliance on the WLIA for educational outreach is a positive relationship that should continue into the future. These sessions are easily accessible and affordably priced.
      ii. Technical assistance. Wood County is currently connected to the WLIP Internet Land Information Clearinghouse and Technical Assistance List Server Service. Staff regularly attends quarterly WLIA educational sessions, including the annual conference. Wood County is also active in providing in-house training to employees using land information management systems.
      iii. Land Information Officer Network (LION). Wood County participates in the Land Information Officers Network to address issues that pertain directly to county government land records modernization programs and the WLIP. LION has proven to be an effective forum for land information officers to discuss and act on issues that directly affect county land information programs
      iv. Software assistance. The County has annual maintenance contracts with the GIS software vendor Environmental Systems Research Incorporated (ESRI). With the maintenance contract all software upgrades and patches are included. County staff is also entitled to customer support from ESRI as long as the maintenance contracts are kept up-to-date. ESRI also facilitates peer support for other users through its web page and has developed a web environment where additional scripts and software tools can be shared.

b. Financing. We have been able to replace manual information management with modern systems and absorb the operational costs into existing yearly budget expenditures. Departments that have benefited from modernized systems provided by the land records program have accepted and budgeted for any additional costs that maintenance of the system may present.

The County has been progressing with modernization projects using resourceful, cost-effective means. Due to limited funds many past projects have been completed with existing or LTE staff, and been approached as cooperative efforts among departments.

The Wisconsin Land Information Program is critical to the continuance of modernization projects. The program in Wood County is almost entirely funded by retained fees generated by the Register of Deeds Office. Without the program funds it is likely that modernization projects would be scaled back to a dangerously low level that would affect the future progress of the program.

It is important to recognize the contribution the Land Records Modernization Program has made to records management in the County. Without ongoing funding generated from the WLIP, Wood County would not have made the significant progress experienced since 1991. Funding for the WLIP is generated by documents recorded in County Register of Deeds Office. A portion of the recording fee collected by the Register of Deeds is intended to fund land records modernization efforts. In recent years the state of Wisconsin has redirected fees generated by the WLIP to fund non land records expenditures. Efforts should be made to ensure that the land records fees are appropriately spent on land records modernization efforts.

c. Procurement. As per Wood County Board of Supervisors policy, the County utilizes competitive procurement processes (bid, RFP and justified sole-source) consistent with state of Wisconsin and local procurement rules.

2. Problems Encountered. The WLIP has contributed to the statewide advancement of land records modernization efforts. Much of the advancement has been made possible by the overall program and the funding source of retained fees, base-budget grants, contribution-based grant awards, and strategic initiative grants. In recent years WLIP funds have been diverted to fund other state programs and needs. As a result grant programs that historically benefited Wood County on an annual basis are no longer possible because the funds are allocated to fill state budget gaps and/or other state grant programs such as the Comprehensive Planning Grant Program. Using program funds in this manner goes against the original intent of the WLIP funding mechanism.

D. Custodial Responsibilities.

Forestry. The Forestry Department maintains area-wide and compartmental maps of County forestland. These maps are used to depict ownership, stand types, timber sales, cutting schedules, and many other forest management activities.
Authority by internal policy.

Treasurer / Real Property Lister. The Treasurer's Office keeps tax information and legal descriptions for parcels in Wood County. Tax data is updated through the Treasurer's Office for all jurisdictions except Marshfield and Wisconsin Rapids.
Authority by § 59.25, and § 70.09

Sheriff's Department/Shared Dispatch. Emergency 911 Dispatch utilizes computerized base maps to help with routing of emergency vehicles to incidents that are called in from hard-line and cellular phones. Most of the base map data is maintained by the Land Information Office, but Shared Dispatch does maintain the Master Street Address Guide (MSAG). Dispatch also maintains records of incoming calls on a computer database.
Authority by internal policy and § 146.70

County Surveyor. The County Surveyor is responsible for maintaining records pertaining to PLSS corners, section summaries, HARN, field notes and other survey documents. The surveyor position is part-time and responsibilities are limited to records maintenance. Survey work is contracted on an as-need basis.
Authority by internal policy and § 59.74

Register of Deeds. The Register of Deeds Office is responsible for scanning of recorded documents, maintenance of a tract index, grantee/grantor index, Unified Commercial Code (UCC), and records of certified survey maps and plats.
Authority by § 59.43

Land Information Office. The County Land Information Office is responsible for the majority of the GIS data used by the County as well as maintaining the data for distribution. Staffing of 1 GIS Specialist dedicated to this responsibility makes this possible. In addition the Land Information Plan is written and implementation of it is coordinated by the Land Information Officer. Most mapping and data requests are completed by this office.
Maintain County base data. *Authority by internal policy.*
Prepare, maintain and implement County Land Information Plan. *Authority by § 59.72*
Create and maintain digital parcel maps. *Authority by internal policy.*
File County aerial photography. *Authority by internal policy.*
Complete mapping and data requests. *Authority by internal policy.*
Coordinate and support land records modernization efforts among departments. *Authority by § 59.72*

Land Conservation Office. Programs administered by Land Conservation utilize computer databases and mapping for information storage and retrieval. GIS and land records are used in the wildlife damage and abatement program, erosion control, crop management, non-metallic mining

reclamation program, and a variety of other programs. Inventories are created to keep track of a variety of land-based activities in the County.
Farmland preservation inventory. *Authority by internal policy.*
Nonmetallic mining inventory. *Authority by § 295.13*
Manure storage facilities. *Authority by § 92.16*
Watershed management. *Authority by internal policy.*

Health Department. Environmental health responsibilities of the Health Department require monitoring of numerous land-based data. The Department is involved with education and protection of groundwater resources, education on lead poisoning prevention, investigation and enforcement of the County Public Health Ordinance, Public Health preparedness, as well as many other programs that promote health and prevent disease and injury. In recent years there has been more interest in utilizing GIS in mapping health related instances and issues.
Authority by internal policy.

Emergency Management Agency. The Emergency Management Agency is responsible for maintaining accurate information regarding materials, facilities, and situations that have the potential for creating life or property threatening conditions. Some of the information maintained includes hazardous material storage locations, building number index, highway accident data, mass care/shelter facilities, resource inventory, and emergency plans.
Authority by internal policy and § 166, and § 59.54

Parks Department. The Parks Department maintains a wide variety of land-based data. Mapping of all park and recreation facilities is created and maintained in cooperation with the County Land Information Office. Other land information maintained is related to facility management. This includes scheduling information for park and trail maintenance, park mowing, road grading and patching, and fence maintenance. The department also maintains park facility inventory and informational maps for parks customers.
Authority by internal policy.

Planning & Zoning Office. Office activities and programs are supported by data that are primarily maintained in map and database format. The following listing includes some of the existing land records maintained in the Planning and Zoning Office:
Bicycle trails. *Authority by internal policy.*
School district boundaries. *Authority by internal policy.*
Land use maps. *Authority by internal policy.*
Zoning maps. *Authority by internal policy.*
Planning maps and documents. *Authority by internal policy and § 66.1001*
Land subdivision review. *Authority by § 236.*
Private onsite waste treatment system inventory and maintenance records, and permit information. *Authority by Com 83.54*
Zoning permit information. *Authority by internal policy.*
Demographic data. *Authority by internal policy.*
Supervisory districts. *Authority by internal policy.*
Federal Emergency Management Agency flood maps. *Authority by internal policy.*
Wisconsin Department of Natural Resources digital wetland inventory. *Authority by internal policy.*

Highway Department. The Highway Department maintains information relating to the inventory of County roads, bridges, culverts, and other transportation-related facilities. A road registry is maintained by the Department to provide historical reference for all roadways in the County. In regards to legal width, alignment, and extent of existing roadways, the road registry is the main data source. The Department also maintains road deck files for surface and subsurface construction information, sign inventories, culvert inventories, and driveway access inventories. *Authority by internal policy.*

E. Framework Data, System Implementation and Statewide Standards.

1. Geographic Positioning Reference Frameworks

a. **Geodetic control networks.** All data is based on the Wood County Wisconsin Coordinate System which is mathematically relatable to the North American Datum (NAD) 83(91) and can be geographically referenced for use by others.

Wood County completed a densification from stations within the Wisconsin High Accuracy Reference network (HARN) in 1995 with the assistance of a WLIP grant. In total, 104 monuments are included in this network: 12 - 16" dia. x 5' deep concrete monuments built to DOT specifications; 5 NGS monuments that were already in existence; 75 - 6" dia. x 7' deep concrete and steel monuments designed by our local surveyors; and 12 section corner monuments, all of which are Harrison or Waupaca Foundry cast iron.

The network was designed with the assistance of the Department of Transportation. Lampert, Lee & Assoc., Wisconsin Rapids, WI was awarded the contract for the observations on the project.

The Wood County geodetic network was developed with three levels of accuracy, and complies with the WLIB Specifications and Guidelines to Support Densification of the Wisconsin High Accuracy Reference Network (HARN) Using Global Positioning System (GPS) Technology - June, 1995.

b. **Public Land Survey System (PLSS).** There are 2544 PLSS corner and quarter corner monuments in Wood County. In 2009 the tie sheets for all PLSS monuments were scanned and made available through the Wood County Interactive GIS Map. As a result of the imaging project, a complete inventory of when each monument was last maintained was generated. The County Surveyor annually budgets for maintenance of PLSS monuments. Corner maintenance is focused on corners that need it most due to a significant lapse of time since last being maintained, or corners that have been reported as being disturbed. Maintenance and perpetuation of PLSS corners complies with Wisconsin Administrative Code AE 7.08 and § 59.74.

The County also has a “bounty program” in place where surveyors are paid a set fee for maintenance of corners that have been disturbed and are important to land surveys that they are completing. Preapproval for each corner covered under this program is necessary.

The County works with towns to maintain corners that fall in the right-of way of County highways and local road projects. Towns are encouraged to contact the County Surveyor prior to commencement of any local road improvements that could affect PLSS corners. The County annually contracts with a registered land surveyor to maintain the corners that will be impacted by County highway and local road projects.

2. Orthoimagery and Georeferenced Image Base Data

a. **Photogrammetric base maps.** Wood County's most recent digital orthophotography flight was in spring of 2010. The County uses the orthophotography to update features such as driveways, hydrography, and land use.

b. **Digital orthophoto (DOP).** The County acquired 18" color digital orthophotography in 2010 and anticipates acquiring updated photos every 5 years.

c. **Digital Raster Graphics(DRG).** In 1998, Wood County purchased the USGS DRGs for Central Wisconsin. These files have been converted to Wood County coordinates, tagged with their proper 7.5 minute quadrangle name and are available to departments that utilize GIS, and the public through the Wood County Interactive GIS.

d. **Satellite Imagery.** Satellite imagery has been around for a while, but only recently has been considered attainable by county government as pricing has become more affordable, and image quality has improved. Wood County has never acquired satellite imagery, but will consider it in the future. Future consideration of purchasing satellite images is dependant on technological advances in the field and the cost and benefits of purchasing it in comparison to film and digital-based orthophotography.

e. **Oblique Aerial Imagery.** In recent years there has been a significant amount of interest and support for oblique aerial imagery in Wood County. Most of the interest has been from law enforcement agencies and emergency responders, but the use and benefits of this kind of imagery is very broad and would benefit a number of functions of government agencies, the private sector, and the general public. The County does feel there is justification for investment in oblique aerial imagery, however acquisition will likely not be possible unless an opportunity arises for cost-sharing to cover the cost of this project.

f. **Historic Aerial Imagery –** Wood County, like most other counties has a wide variety of historic aerial imagery dating as far back as the mid-thirties. The most comprehensive list of historic aerial imagery can be found on the Wisconsin State Cartographer's Office (SCO) website. The website allows users to search any county in Wisconsin for imagery, and submit updates or revisions to the index if necessary. Most of the historic imagery for Wood County is not in a digital format that is usable in the GIS. Wood County does not have the original film or images for most of the historic aerial imagery because the County did not commission the acquisition of the imagery. 2005 was the first time that Wood County contracted to have the entire County flown. This flight was part of a consortium flight coordinated by the North Central Wisconsin Regional Planning Commission.

3. Elevation Data Products and Topographic Base Data

a. **Digital elevation models (DEM).** Wood County does not have a digital elevation model, but will consider acquiring a DEM as part of the DOP update in 2015.

b. **Digital terrain models.** Wood County does not have a digital terrain model, but will consider acquiring a DTM as part of the DOP update in 2015.

c. **Triangulated irregular networks (TIN).** The County does not have a digital terrain model, but will consider acquiring a TIN as part of the DOP update in 2015.

d. **Contours.** Contours will be completed for Wood County when funding is available in the future. There is a great need for accurate contour information given the relatively flat terrain in the County and the fact that about 25% of the land area is considered to be in the 100-year flood zone by the Federal Emergency Management Agency. Without accurate contour information county wide, proving whether or not land and/or improvements are in a flood zone can be challenging and costly for the property owner.

e. **Light Detection and Ranging (LIDAR).** LIDAR technology is likely the most cost-effective means of improving elevation information county wide. Acquisition of LIDAR is a way to get a clearer, more accurate picture of the terrain. Improved elevation information can be used to construct more accurate floodplain mapping to better manage drainage and stormwater. LIDAR will be acquired in the future dependant on available funding and possible cost sharing opportunities.

f. **Interferometric Synthetic Aperture Radar (IFSAR).** Wood County does not have plans to acquire IFSAR technology in the next 5 years.

4. Parcel Mapping

a. – b. **Parcel map preparation.** Parcel maps that are created reference the public land survey system and can be used by local governmental units for accurate land title boundary line or land survey line information. Parcel maps contain parcel identification numbers that in the future will be redesigned to meet the WLIA's Parcel Geo-Locator Standard. The parcel maps are not a replacement for recorded documents that are the legal basis for parcel geometry and ownership information. Mapping meets the WLIA's Digital Parcel Mapping Standard.

c. **Coordinate system used.** Parcel mapping and most other mapping base layers are geodetically referenced to the Wood County Coordinate System, which is mathematically relatable to the North American Datum (NAD) 83(91).

d. **Parcel ID.** Wood County and the municipalities involved with parcel management (Wisconsin Rapids and Marshfield) are committed to developing a numbering scheme that is compliant with the WLIA's Parcel Geo-Locator Standard. The parcel identification number that is currently used has been in place for many years and serves as a link to many recorded and unrecorded documents that are associated with parcels.

5. Parcel Administration and Assessment Information

a. **Design.** Wood County maintains digital parcel mapping that links up to the County tax database using a parcel identification number (PIN). All parcels have a PIN, but the parcel cannot be located on the Public Land Survey System because the PIN is not structured as a geo-locator. The PIN will be redesigned to the WLIA Parcel Geo-Locator Standard in the near future, while concurrently maintaining the current PIN format indefinitely. With the new geo-locator PIN, the approximate location of the parcel in the County will be able to be determined by the PIN alone.

b. **Activities.** The following items will be maintained to be used in conjunction with digital parcel mapping. All information is compliant with local government standards.

Parcel Identification Number (PIN). The PIN will be redesigned to the WLIA Parcel Geo-Locator Standard in the near future, and the current PIN will also be maintained.

Tax data. Tax data is maintained by the County Real Property Lister. This data is incorporated into the GIS and made available to the public through the County Interactive GIS Map. The Systems Department supports the processing of data in the creation of tax bills, and receipting of tax payments.

Site Address. The County maintains a site address database that serves as the most common means to query land information.

Owner name & address. The name of the tax parcel owner is maintained by the real property lister and is essential for the tax billing process.

Description/current document pertaining to parcel. The tax parcel database contains an abbreviated legal description and reference to deeds that have been recorded that show the legal owner of the property.

Document imaging. Since 1999 all documents related to property transactions have been scanned, digitally indexed, and recorded by the County Register of Deeds Office. The process of back scanning all pre-1999 documents began in 2010 and should be completed by 2014.

Real estate transactions. The County Register of Deeds Office maintains all documents pertaining to real estate transactions that have been submitted to the office to be indexed and recorded.

Easements and restrictions, including conservation easements. Easements and other restrictions to property that are submitted to the Register of Deeds Office are indexed and recorded.

Tax exempt status. All property that is legally tax-exempt is coded so that taxes are not assessed on the property.

Zip codes. Zip codes of all property owners are included in the tax database.

Assessment class. State of Wisconsin Department of Revenue assessment classes are assigned to every property in the County.

Public lands. Public lands are tax exempt and can be mapped in the GIS.

Liens. All liens are indexed and recorded by the Register of Deeds Office.

Evidence of title. The Register of Deeds Office maintains a digital tract index that allows property to be queried to determine legal title of the property.

6. **Street/Road Centerlines, Address Ranges and Address Points**
   a. **Transportation network (streets, roads, highways, railroads).** The transportation network for the County is mapped and consists primarily of facilities related to vehicular, rail and air transportation.

b. **Right-of-ways.** Approximate right-of-way is available for all townships and villages in Wood County. A comprehensive determination of right-of-way ownership and transfers has not been completed.
c. **Centerlines.** All centerlines with address ranges are mapped for the County. The centerlines are used to create street maps and other base maps, and are an integral component of the emergency response system.
d. **Address ranges.** Address ranges are maintained by the County Planning & Zoning Office so that they can be used to automatically locate addresses through geocoding.
e. **Site address database.** The County Emergency Management Agency issues addresses for most towns, and some villages and maintains information on newly issued site addresses, or site addresses that are removed. The County works with municipalities that it does not issue addresses for, to update the site address database that is used for a variety of applications including emergency dispatch.
f. **Address point, structure and/or driveway.** Site address points are maintained and merged with the parcel mapping so that properties can be queried by building number. Address points are located at the approximate driveway locations. Driveway and structure locations are also available and updated as new orthoimagery becomes available.
g. **Road names.** Road names are maintained as an attribute in the County street centerline layer.
h. **Functional class.** The County relies on the Wisconsin District 4 Department of Transportation for up-to-date functional class information.
i. **Places/landmarks.** Wood County has a GIS landmark layer that is used for a variety of mapping applications.
j. **Integration with the County's/City Master Street Address Guide (MSAG).** The County Shared Dispatch has integrated the street centerline file and the MSAG in the Enhanced 911 system.
k. **Ability to support emergency planning, response and mapping.** Data is capable of supporting emergency planning, response and mapping. The County has experience using geospatial data in emergency response and mapping in cases such as wild land fire management, searching for missing persons, and damage assessments. Geospatial data is also an integral part of emergency planning and incorporated into mock emergency response drills.
l. **Ability to support wireless 911.** The County data layers are capable of being used to support enhanced wireless 911. Enhanced 911 technology is capable of mapping the origin of land line and cellular phone calls.

7. Hydrography, Hydrology and Wetlands mapping

a. **Hydrography.** The hydrography of the County is mapped and was created based off of data from the Wisconsin Department of Natural Resources.
b. **Watersheds.** Watersheds are mapped for the County and were acquired from the Wisconsin Department of Natural Resources.
c. **Hydrogeology.** There is no hydrogeology data available for Wood County.
d. **Impacts on the environment.** The County references the Bureau of Remediation and Redevelopment Tracking System (BRRTS) to identify groundwater contamination or related brownfield data.
e. **Wetlands Mapping activities.** Digital wetlands maps were purchased directly from the DNR Water Regulations Division in 1996. This information has been incorporated into the

County GIS and is available for use by all departments having access to the system. These maps were created as per § 23.32.

8. **Soils Mapping, Land Cover and other Natural Resource Data.**
   a. **Soils mapping activities.** Digital soils maps are available for Wood County as a result of a statewide strategic initiative. All soils data is consistent with Natural Resource Conservation Service standards and specifications. Maintenance of soils data is needed for Wood County and coordinated by the NRCS.
   b. **Land cover.** Mapping for detailed land cover does not exist for Wood County, however the WISCLAND Land Cover is referenced on occasion. WISCLAND Land Cover was created primarily from 1992 satellite imagery and generally identifies land cover features of 5 acres or larger.
   c. **Forests.** Forested areas in the County are not mapped at this time. Some municipalities have forested areas mapped on an as-need basis for comprehensive planning projects.
   d. **Geology.** The geology of the County is not available at this time.
   e. **Hydrogeology.** There is no hydrogeology data available for Wood County.
   f. **Non-metallic mining.** The County currently has a GIS layer that contains all active and most inactive non-metallic mining sites. The inventory was created by Planning & Zoning Office and is currently maintained by the Land Conservation Department.
   g. **Endangered Resources.** Endangered resources are currently not mapped. The County would like to include mapping of the general location of endangered resources to be considered when changes in land use are proposed or occur.
   h. **Impacts on the environment.** The County references the Wisconsin Department of Natural Resources Bureau of Remediation and Redevelopment Tracking System (BRRTS) to identify groundwater contamination or related brownfield data.

9. **Land Use Mapping**
   a. **Mapping of existing land use.** Land use maps are available for all townships in Wood County and created using the Land-Based Classification Standards. Land use mapping for cities and villages will be completed in the future on an as-need basis. Land use codes that are used in the tax parcel database are compliant with the Department of Revenue Land Use Classification System. All mapped land use is local government compliant and used by municipalities in planning projects.
   b. **Mapping of planned land use.** Planned land use was created as a product of the Wood County Comprehensive Plan that was completed in 2010. Planned land use is based off of wetlands, floodplains, and water bodies that limit or prohibit future development.

10. **Zoning Mapping**
    a. **Zoning districts.** In Wood County all 4 cities, all 8 villages, and 11 of 22 townships have zoning. Municipalities that have zoning ordinances, administer their zoning regulations and are responsible for ordinance and map amendments. At the request of the municipality the County Planning and Zoning Office will assist with the creation or update of zoning maps.
    b. **Shorelands.** Shoreland areas are determined referencing the County hydrography layer and buffering to delineate shoreland zones as defined by the County Shoreland Zoning Ordinance.

c. **Floodplains and floodways.** In 2010 updated floodplain and floodway mapping was adopted. Although the mapping was created using the best available information, more accurate elevation information is needed to create better floodplain mapping that can more accurately delineate boundaries. The floodplain mapping update was initiated by the Federal Emergency Management Agency.
d. **Environmental corridors.** Environmental corridors are not mapped because no inventory identifies what areas are considered to be environmental corridors. Furthermore, there are no County standards that define what constitutes an environmental corridor. In Wood County, typically floodplain, wetlands, shoreland areas, and areas with steep slopes are mapped on an as need basis for municipalities or project areas to identify lands with development constraints.
e. **Burial sites.** There is no mapping of burial sites located in the County.
f. **Archaeological sites.** Archaeological sites are not mapped at this time. Determination of archaeological sites and mapping them takes place on an as-need basis where changes in land use warrants identification of these sites.
g. **Historic/cultural sites.** For information on registered historical sites the state and federal historic registries are referenced. There is no inventory that is locally maintained and mapped, however, state and federal registries can be updated by County residents that are knowledgeable about and familiar with historical and cultural sites.

11. Election and Administrative Boundary System

All boundaries below are compliant with local government uses.

a. **Election (voting district) boundaries, wards, supervisory, assembly, senate, etc.** The County created ward and supervisory districts, and voting district maps in 2001. Supervisory districts were remapped in 2008 when the number of supervisors was reduced from 38 to 19.
b. **Legislative districts.** Legislative district maps are maintained by the state and referenced as needed.
c. **Utility districts.** Detailed mapping for utility districts is not maintained at this time.
d. **School districts.** District information is included in the tax database and district maps can be created in the GIS.
e. **Tax incremental financing districts.** The County tax database codes all parcels that are included in TIF districts.
f. **Agency administrative districts and zip codes.** General digital zip code boundaries are available.
g. **Census geographies.** Wood County receives Census geography from the U.S. Census Bureau and works with the Bureau to update census geographies prior to the decennial census. Census geography is also available from the U.S. Census Bureau website.
h. **Public administered lands.** These lands are included in the GIS parcel maps and can be queried and mapped on request.
i. **Civil division boundaries.** The boundaries of towns, cities and villages are based off of County parcel mapping and updated to reflect any annexations or detachments.
j. **Native American lands.** All Native American lands are included in the County parcel mapping and can be queried and mapped on request.
k. **County boundaries.** The Wisconsin county outline layer is acquired from a state source and used in the County GIS.

l. **State outline.** The Wisconsin State outline was acquired from a state source and is used in the County GIS.
m. **Lake districts.** There are no lake districts in Wood County.

12. Infrastructure and Facility Management.

a. **Emergency service districts.** Emergency service districts are mapped and referenced in the County Shared Dispatch Center to dispatch the appropriate emergency responders.
b. **911 call center service areas & center locations.** Wood County Shared Dispatch Center is designated as the County PSAP. The Shared Dispatch Center is located in Wisconsin Rapids in the Wood County Courthouse. A backup 911 call center is located in the Marshfield City Hall.
c. **Fire/Police Districts.** Fire and police districts are mapped and referenced in the County Shared Dispatch Center to dispatch the appropriate law enforcement and/or emergency responders.
d. **Fire/Police Stations.** The location of fire and police stations are mapped and included with the County landmark information.
e. **Hospitals and healthcare facilities.** The locations of hospitals and healthcare facilities are mapped and included with the County landmark information.
f. **Government facilities.** Government facilities can be identified by tax-exempt status and ownership in the parcel mapping when linked to the tax database.
g. **Utilities.** Utilities that provide service in the area have maps of varying technology and degree of accuracy. Some of the utilities are willing to share data as part of data sharing agreements. The County maintains a GIS layer of larger gas lines and large capacity overhead power lines.
h. **Parks and Recreational Trails.** Boundaries of all County parks are maintained, in addition, park boundaries are shown in the tax parcel mapping as exempt and owned by Wood County. Recreation trail routes are maintained in the County parks as well as bicycle and pedestrian trails throughout the County. Snowmobile trails for the entire County are mapped, and ATV trails on County property are mapped.
i. **Transit system.** The transit system in consists primarily of streets and railroad which are both mapped.
j. **Bridges, culverts, traffic road signs.** The Highway Department maintains bridge and culvert information in a database. The department has a GIS application that they use to maintain a traffic road sign inventory.
k. **Airports and airfields.** Both the Marshfield and Wisconsin Rapids airports are mapped.
l. **Harbors.** There are no harbors in the County.
m. **Boat landings.** Boat landings are mapped and shown on County Park resource maps.
n. **Hazardous materials sites.** The County Emergency Management Agency maintains a GIS layer that identifies sites where significant amounts of hazardous materials are stored. The DNR provides information about contaminated properties and other activities related to the investigation and cleanup of contaminated soil or groundwater through the Bureau for Remediation and Redevelopment Tracking System (BRRTS) website.
o. **Landfills.** The location of landfills can be found through the Wisconsin DNR BRRTS website.

13. Database Design and System Implementation

a. **Design evaluation.** Most data that the County creates/acquires is used by more than one department. Prior to creating/using new data sets the primary users of the data are considered and consulted as to their needs. Other consideration of design includes consistency of data sets and practical naming and design. Design evaluation weighs the needs of the users and balances it with best practices of design. Design evaluation will need to take into consideration the flexibility and the added functionality of geodatabases.

b. **Project approach.** Approach varies on each project depending on who will be completing it, and the size and longevity of it. Projects that are completed for a single need or one-time use are not approached as methodically as larger ones that will be integrated into daily workflow and maintained over a long period of time. Larger projects that are integrated into workflow many times are developed with documentation on how the project was completed, timeline, quality control measures, and maintenance schedules.

c. **Timeline.** Timelines are usually assigned to each project. Aggressiveness of the timeline varies to its' urgency and priority among other projects. It is not uncommon for timelines and priorities to be adjusted as more time-sensitive priority projects arise.

d. **Metadata policies.** Metadata is maintained for many of the County's GIS layers. It is not 100% complete at this time, but metadata improvement is an ongoing initiative that will strive for near complete coverage of all Wood County GIS layers. Data sets that are created for a specific use for a limited period of time and for an identified user may not be subject to metadata requirements of shared GIS baselayers.

e. **Security/privacy policies.** Security of GIS data and other land information from outside threat is administered by the Systems Department. Administration of user accounts is administered by the Systems Department and land records staff. Regular backups are maintained both on and off-site to restore corrupt or compromised data. Privacy will be maintained to land records where appropriate, but most of the land records used by County staff are subject to the Open Records Law of Wisconsin.

f. **Implementation and maintenance strategy.** Prior to implementation of any project or system, informal evaluations take place to determine if the change will meet the goals of the Wood County Land Records Modernization Program. Prior to implementation, maintenance strategies and quality control measures are considered and a determination made as to if the implementation will be beneficial and the maintenance attainable.

g. **Data quality management.** Following the completion of updates, the custodian is responsible for reviewing the accuracy of the changes, or requesting review assistance from other appropriate County staff. Quality control in many cases is achieved simply by notifying the custodian of errors or necessary updates when they are encountered during use.

h. **Needs assessment.** Needs that are identified subsequent the planning process are considered and carried out dependant on the value and size of the project, long-term benefits, and if it will help achieve the goals of the plan. In recent years formal needs assessments have not been completed. Identifying needs of departments has been through developing a clear understanding of the function of the departments, one-on-one conversations with staff, discussions with elected officials that provide oversight for departments, and day-to-day interaction with the end users of land information and geospatial data.

i. **Data structure and format (e.g. topology).** Topology rules are developed as needed for any Geographic Information System datasets.

j. **GIS data model.** The Wood County GIS data model is designed with the practical day-to-day use of departments in mind and naming conventions that are easy for end users to understand. The ESRI GIS software can generate a visual model that shows how the data is organized.
k. **Data dictionary.** When necessary data dictionaries are created for data sets.
l. **Coding schema.** The County uses a simple coding schema for many data sets. Coding schema is a combination of County created schema and that of other agencies.
m. **Transaction management.** Transaction management is currently in place for some GIS layers by date stamping records as they are updated or changed, and limiting user access to certain kinds of transactions and updates.
n. **Organizational information flows.** Understanding of organizational information flows is necessary in implementing improved land records systems, and ensuring proper maintenance. Improving information flow is a new initiative of this plan.
o. **Data conversion.** All County departments use data in the same geographically referenced coordinate system. On request staff can convert data for the customer. Enhancements to ESRI software have streamlined the conversion process and the compatibility of data sets in different projections. Tabular data can be converted in almost any common format to meet the customer's needs.
p. **Ability to integrate with other databases and information systems.** Prior to the creation of data sets, there is significant consideration on what will be needed to integrate and link/join the database with other information systems. This is especially important to Wood County given the number of departments that have custodial responsibility over data that other departments integrate into their workflow on a daily basis.
q. **Data interchange standards.** Data interchange arrangements have been on an informal basis. Due to the use of industry standard GIS software, interchange of data has been effortless, minimizing the need for formal arrangements. Wood County utilizes the Wisconsin Land Information Board's model for the exchange of geodetic control data.

F. Public Access.

a. **Use of technology to facilitate efficient access.** Wood County encourages the use of technology to facilitate efficient access to land records. Improved access to land records is made possible through internet and intranet based applications. Special attention is given to the ease-of-use of these applications so that even the occasional user can access land records easily. In the future more internet-based applications will be developed to serve records to the public in an efficient and user-friendly application.
b. **Use of third party technology for access.** The County currently uses third party technology to provide access to Register of Deeds documents that are in a digital format. Given the variety and complexity of some of the records that the County provides access to, third party technology will continue to be an option to improve access to open records.
c. **Data sharing policies (copyright, licensing, fees etc).** Data-sharing is encouraged because of the resulting cost savings and efficiencies. The County has both formal and informal agreements to share data when possible. No data is subject to copyright or licensing, but in the future copyright and licensing will be considered as needed. The County does have a fee schedule for distribution of the maps and data. Much of the data that is exchanged among departments and different units of government is not subject to the fee schedule, but free on charge in return for future mapping and data cooperation.

d. **Open access to data in existing format.** Wood County makes land records information available according to the requirements of the Wisconsin Open Records Law.
e. **Subscription-based or public-facing web services.** Subscription-based services will continue for access to Register of Deeds documents. Free access to land records accessible through the County Interactive GIS Map, the Land Record's web page, and the County Surveyor's web page will continue unless policy changes necessitate charging for the access in the future. The County will continue to monitor public-facing web services as an option for making land records information available to the public, however, there are currently no plans to pursue this option.
f. **Optional production of customized data on cost-recovery or other basis.** The County offers the service of customized mapping and data compilation on a time-and-materials basis.
g. **Internet accessibility (ADA compliance, security).** The County website is ADA compliant to the greatest extent possible at this time.
h. **System security.** System security is maintained by the County Systems Department. At this time all data made available to the public through internet applications is a copy of the original data stored on a separate server.
i. **Privacy policies.** The County makes land records information available according to the requirements of the Wisconsin Open Records Law.
j. **Use of the $2 fee designated for land information and housing data.** The $2 fee has been used to make tax parcel data and mapping available over the internet. In the future the $2 will be used to improve and maintain internet mapping applications.

G. Integration and Cooperation

a. **Formal data sharing agreements**. The County currently has a few formal data sharing agreements, but successful exchange of data has often occurred through informal data sharing. Most data is available for free download, and Wood County does not require agreements as a condition of use.
b. **Formal or informal data maintenance agreements.** Informal data maintenance agreements among County departments exist for the maintenance of data.
c. **Cooperative arrangements.** The County does not have any formal cooperative agreements at this time, but advocates and supports the use of data in cooperative agreements. All future formal cooperative agreements will be considered on a case-by-case basis.
d. **Consortia.** Wood County is part of an air photo consortium that was organized by 2 state regional planning commissions. Thirty-three counties were involved in the flight resulting in very affordable digital orthophotography. Similar consortium flights are anticipated to take place every 5 years.
e. **Collaborative arrangements.** The County supports collaborative agreements where efficiencies and cost-savings result. Informal collaborative arrangements have led to many land records successes.
f. **Statutory relationships among counties and state agencies.** The County will comply with any statutory requirements relating to land records.

1. **Integrative/Cooperative relationships.** There are many state and federal agencies that are required to maintain statewide databases of information. Instead of these agencies developing

their own statewide coverages for this data, we would like to see them utilize local data, such as parcels, hydrography, and land use to develop statewide coverages. Wood County shares its GIS data openly free-of-charge and does not require user agreements. Most individuals that need data can download it from the Wood County Land Records website. This arrangement allows customers to obtain data at any time with little or no staff assistance. All of the information that is available is considered open records, and as a result, the County makes every effort to make the information readily available.

2. **Potential partners/projects.** The County plans to participate in future aerial photography flights coordinated by the regional planning commission. Staff is open to partnering on mutual projects provided the project meets the goals of the County Land Information Plan, acceptable County standards, and the portion of County staffing and budgeting is appropriately approved. The County has successfully partnered in the past with state and federal government agencies, local (city, village, and town) government, private sector, non profits, academia, and tribal government. As budgets get progressively more challenging, partnering will be necessary to continue to meet the goals of the Land Information Plan.
3. **Shared/Used Data.** The data that would be shared and used would be considered on a case-by-case basis. Appropriate review of the agreement would take place by the County Corporation Council and approval of the Planning & Zoning staff.
4. **Coordination of funding.** Since the start of the Wood County Land Record Modernization Program in 1990 many County departments have been involved with efforts to modernize records and incorporate geospatial technology into their workflow. The Program has worked with departments closely to provide project planning and implementation, funding to purchase hardware and software, provided startup training and ongoing support. Given the limited funding generated by the Wisconsin Land Information Program, in order to stretch available funding, staff completed most modernization projects in-house utilizing existing staff, summer intern help, and timing projects to leverage addition grant funding and project support.
   In 2010 a Land Information Council was created to review the priorities, needs, policies, and expenditures of the Land Information Office. In 2009 Wisconsin Act 314 created Section 59.72, of the Wisconsin State Statutes, which defines the membership and duties of a Land Information Council. The first meeting of the Land Information Council was held in January of 2011.
5. **Participation of municipalities and other agencies.** Success of the Wood County Land Records Modernization Program to date can be attributed to the resourceful approach that has been used to work towards common goals. The resourceful approach is dependant on cost sharing, cooperative efforts, and pooling resources. Participation of municipalities and other agencies in land records projects has been, and will continue to be a contributing factor to successful land records modernization efforts.

H. Communication, Education, Training and Facilitated Technical Assistance

a. **Documentation of County data, models and processes.** Wood County is continually working on documenting procedures for modernizing land records. Documentation currently exists for many regularly performed procedures that pertain to GIS data creation and maintenance. Much of the data we have contains metadata that promotes the responsible use and maintenance of GIS data.

b. **Resources available.** The Land Information Office serves as a resource for any land-based information, and technical assistance using the many GIS base layers for mapping or analysis projects.
c. **Identification of customer needs.** County staff is responsive to customer needs and they are considered whenever new land records processes or systems are implemented. Meeting customer needs is the primary focus of the Wood County Interactive GIS Map and Property Tax Data web page and improvements are made based on customer requests and feedback.
d. **Coordination of education/training with agencies, associations and educational institutions.** We encourage sharing resources to provide education and training and in the past have offered GIS training sessions that were open to other governmental agencies and the general public. We support training opportunities offered by associations such as the Wisconsin Land Information Association because they are effective ways of providing information on timely topics at a reasonable price. We also encourage and participate in opportunities that educational institutions offer because of the professional quality of instruction that improves staff efficiencies and knowledge. In 2008 Wood County initiated the formation of the Central Wisconsin GIS User Group. The group is made up of GIS professionals from a variety of backgrounds, including local, county, regional and state government, private businesses, and academia. There is no cost to participate in this group, and membership is open to anyone with an interest in GIS and geospatial technology. The group meets quarterly to share educational experiences and discuss issues of common interest.
e. **Use of technology to facilitate education and training.** All County staff have internet access to online training or coursework offered, and participation in training sessions is encouraged. On occasion, educational sessions and demonstrations are presented to staff, elected officials and the general public.
f. **Use of, or plan to participate in Clearinghouse and Technical Assistance List Server.** Wood County land records staff use the Clearinghouse and Technical Assistance List Server as needed.
g. **Use of Land Information Officer education and training funds.** Education and training funds are used to send Land Records Department staff to training at conferences and workshops.

I. Administrative Standards Not Associated With Foundational Elements. This Land Information Plan represents an agreement between the County and the Wisconsin Department of Administration (DOA). This agreement is intended to effectuate the objectives of the Wisconsin Land Information Program as embodied in the enabling legislation. In order for a Plan to be acceptable to the DOA, the DOA and the County agree and consent as follows below. If applicable, discuss any plans, problems, issues, and concerns relative to these agreements.

1. Wood County agrees to observe and follow the statutes relating to the Wisconsin Land Information Program and other relevant statutes.
2. Wood County agrees to permit the Wisconsin Department of Administration access to books, records and projects for inspection and audit.
3. Wood County agrees to annually complete the GIS Inventory Survey.
4. The County agrees to update the plan every 5 years and in the interim as necessary.
5. Development and implementation of an acceptable plan confers certain benefits on local government within a county, including continued eligibility for Program funding. A voluntary

peer review process will be used to assess plan acceptability by the land information community.