



Land Information Plan

2005-2009

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I. EXECUTIVE SUMMARY

A. Identification and Contact Information

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Reviewed and Approved by the Following Committees:

March 17, 2005	Washington County Land Information Advisory Committee
April 27, 2005	Planning Conservation and Parks Committee

C. Summary of the Plan

This plan is the third update to the original Washington County Land Records Modernization Plan completed in 1992. The original plan and its 1998 and 2003 updates documented previous GIS/LIS goals and objectives and established a framework for initial and future program development.

This plan was prepared in accordance to the "Uniform Instructions for Preparing County Land Information Plans" dated December 2004 and describes general goals and objects for the 2005 through 2009 time period. This plan is a living document and will be modified as needed to reflect changes in funding, data/application priorities, and technology. The emphasis of this plan is to 1) maintain and enhance the infrastructure and data acquired under the previous plans, 2) continue to collect and efficiently disseminate quality data to all Washington County Departments, other levels of government and the general public, and 3) expand the use and integration of land information and GIS throughout Washington County.

D. County Land Information Websites

http://maps.co.washington.wi.us/	Washington County GIS Mapping Website
Available summer 2005	Washington County Register of Deeds Document Search

E. Municipal Land Information Websites

http://www.ci.west-bend.wi.us/Paragon/Map_service.htm	City of West Bend
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II. LAND INFORMATION PLAN

A. Goals and Objectives

The following are goals and objectives for the Washington County Land Information and Integration program. Each goal has identified relationships to internal and external customers as appropriate. Some objectives have a target time for completion while others are on going.

The Washington County Land Information Advisory Committee meets regularly to determine the priorities for each objective and the resource requirements to achieve the objective. The Land Information staff established task definitions to accomplish objectives. In some cases additional information about priorities, resources, or tasks are listed with the objective.

1. Statement of Goals and Objectives

Goal 1: To Implement in Washington County, over time, a multipurpose, multi-user, parcel-based, automated mapping and land information system consisting of the following five basic elements:

- a) Geodetic reference framework.
- b) Large-scale planimetric and topographic base maps.
- c) Overlays, including cadastral boundaries and boundaries of various cultural and natural resources.
- d) Identifiers, including parcel numbers and codes associated with various cultural and natural areas.
- e) Non-spatial land information files, including cadastral parcel records and various cultural and natural resource data.

Goal 2: Continue to expand and develop land information datasets and integrate GIS into the daily activities of all Departments that use spatial data.

The Washington County Land Information Advisory Committee will implement changes in land records management that will facilitate

- Improved data accuracy
- Lowering costs and increasing the efficiency of county government
- A reduction in duplication of effort between departments
- Improved access to information for users
- Comprehensive Planning

This goal will be achieved by the following objectives.

Objective 2A: Maintain and keep current all data acquired or developed under the previous versions of this plan.

Objective 2B: Participate in regional and local ground water studies that will result in better base-line and projected ground water levels, use patterns, and quality. This objective provides necessary information for comprehensive planning and protecting the resource.

Objective 2C: Continue to improve county zoning and natural resource data including, but not limited to hydrography, shorelands, floodplains and floodways.

Objective 2D: Develop and implement a plan to systematically inspect the condition of, and repair if needed, all monuments and ties. This objective is first being achieved as a by-product of the nearly complete vertical control

project. Upon the completion of the vertical control project in 2005 a new policy will be created.

Objective 2E: Acquire new digital orthophotography in spring of 2005. This objective continues the established 5-year update cycle and will be accomplished through a regional cooperative administered by the Southeastern Wisconsin Regional Planning Commission (SEWRPC).

Objective 2F: Continue to preserve and modernize historic documents in the Register of Deeds office. This initiative includes the perpetuation of deteriorating paper documents and incorporating additional historic documents into the County's imaging and indexing systems.

Objective 2G: Scan and index all surveys filed with the County Surveyor and residing in the Real Property Lister Office.

Objective 2H: Create a spatial component necessary to display and query businesses, institutions, schools, and other public facilities to satisfy the needs of Emergency Government and the Health Department. Future improvements could expand this data set to meet the needs of Economic Development.

Goal 3: Acquire the hardware, software and data sets required for comprehensive planning.

The GIS has been and will continue to be an invaluable tool throughout the comprehensive planning process. Many of the elements identified in the comprehensive plan require data sets that do not currently exist or vary in format, accuracy, and currency.

Objective 3A: Enhance existing databases maintained by various county departments to support comprehensive planning. Identified data includes storm water management facilities, mining operations, manure storage facilities, and crop lands.

Objective 3B: Continue to identify and acquire or create additional data sets as required to support Washington County's comprehensive planning efforts. Such data sets may include, but is not limited to data sets needed for the housing, utilities and community facilities, economic development, intergovernmental cooperation, transportation, land use and the agricultural, natural and cultural resource elements of the comprehensive plan.

Object 3C: Comprehensive planning will require data that is currently maintained by various sources. This includes State Government, Southeastern Wisconsin Regional Planning Commission, Neighboring Counties, and local units of government. Whenever possible, Washington County will acquire and incorporate existing data. Conversely, the data maintained by

Washington County should prove useful to local units of government and neighboring counties as they prepare their plans. It is the policy of Washington County to make county maintained data available to other units of governments at no cost.

Objective 3D: Acquire, as needed, hardware and software necessary to provide/present data in a user friendly manner for public participation efforts as outlined in the multi-jurisdictional comprehensive plan work program and public participation plan as adopted by the Washington County Board of Supervisors.

Goal 4: Support and expand mapping capability in the Washington County Sheriff Department.

Digital mapping and GIS is becoming more important in the law enforcement community. This need is especially apparent when locating cellular 911 callers (Wireless e911 phase II).

Objective 4A: Support the mapping component being implemented in the Washington County Dispatch Center. The Washington County Sheriff Dispatch center is the designated Public Safety Answering Point (PSAP) to apply for enhanced wireless phase II 911 grants. The Washington County Land Information Program will support this implementation by supplying the necessary map data. This will include enhancements to the existing road centerline data and creating additional data sets as needed, including site address points and road intersection points. This objective will enable a dispatcher to locate, on a map, incoming cellular 911 callers. It will also have benefits to traditional landline dispatching.

Objective 4B: Support a system to provide spatial querying and pattern analysis of all incidents entered in the Washington County Computer Aided Dispatch database. This objective, along, with objective 4A may be accomplished with a single all encompassing system. This objective will also benefit other departments including the Washington County Highway Department.

Objective 4C: Washington County has already implemented a geographically based automated calling system through Homeland Security grants. This system provides an additional tool to quickly notify residences and business in the event of an emergency. The Washington County GIS will continue to provide mapping support for this application.

Goal 5: Implement new advances in hardware and software and where required, develop custom applications to support land records modernization and integration.

Objective 5A: Integrate the GIS and document imaging system. This objective will provide direct links from graphics (parcels, road segments, flood plain boundaries, etc.) in the GIS to images (deeds, highway plans, surveys, etc.) in the document imaging system.

Objective 5B: In 2002 Washington County implemented a system in the Register of Deeds to support electronic document filing. The signed contract includes system support through September 2005. Continued expense to support this function is anticipated.

Objective 5C: Develop a comprehensive system to geographically track all land conservation practices and integrate existing tabular data into a single user-friendly application.

Objective 5D: Develop a comprehensive system to integrate county permitting and private septic information with other data in the GIS including parcel mapping.

Goal 6: Encourage Internal and External GIS Program coordination and cooperation and provide access to data as guided by the requirements and restrictions of statutes and county policy.

Objective 6A: Washington County has developed an application to disseminate mapping and tax data to the Internet. Differing levels of access are provided to the general public, local municipalities, and county users. This application will continue to be enhanced and expanded to accommodate newly acquired data and increased needs throughout the County. This application may make it possible for smaller municipalities to benefit from the Washington County GIS without any additional investment. This application includes a wealth of information on housing data.

Objective 6B: Implement an Internet application to provide free access to Register of Deeds document indexes. Scanned deeds will be accessible for the statutorily required fee. All subdivisions, all certified survey maps (CSM), all Condominiums and deeds recorded after 2/3/1992 are scanned and will be accessible through this system.

Objective 6C: Develop an application to allow greater access to local assessment data through the Washington County GIS Internet application. Each local unit of government in the County currently maintains assessment data. Formats vary and some data are not digital. This objective may require the creation of multiple 'converters' to ensure all data are compatible and usable within the developed application. It is expected that participation in this application will be voluntary.

Objective 6D: Washington County has a privacy policy for distributing land records to local, regional, state, and federal governments and the general public. This policy includes how data are accessible on the Internet. The policy will be revisited as the needs and concerns of Washington County residents change.

Objective 6E: Define and implement appropriate data standards and documentation, including metadata, to support intra-departmental and intra-county cooperation and data sharing. (Ongoing)

Objective 6F: Seek opportunities for data sharing, including formal agreements, between the county and all levels of government, utilities and other data creators. This will include disseminating GIS data for the purpose of comprehensive planning.

Objective 6G: Use the GIS to disseminate data for the public participation portion of the comprehensive planning process.

Objective 6H: Cooperate in state and regional land record distribution initiatives that are consistent with the Washington County data distribution policy.

Goal 7: Provide short term and long term planning, training, and technical support for the GIS program.

A well-trained staff is necessary to provide technical support to all land records and GIS users in the County. The goal is to assure that funding mechanisms, staff, and technical resources are available to support the expanding GIS program.

Objective 7A: Attendance at Wisconsin Land Information Association and other professional organizations and users groups will be encouraged for all county GIS staff.

Objective 7B: Technical GIS staff will provide training and support for less technical county staff.

Goal 8: Actively seek various funding sources for Land Records Modernization and Integration projects.

Objective 8A: Washington County will pursue cooperative funding arrangements with other governmental units, state government agencies, state programs or multi-jurisdictional organizations.

Objective 8B: Pursue available grants and non-traditional funding sources for the advancement of land records modernization and integration.

Measurement criteria for achieving the above goals.

a. Data acquired from state or local sources

Whenever practical, Washington County tries to acquire and incorporate existing data before developing a new data set. The goals and objectives above highlight areas where similar data does not exist, or areas where the available data was not captured at a sufficient scale or level of detail to accommodate county needs.

Examples where Washington County has acquired data from outside organizations include parcel and other data from the City of West Bend, local zoning for those municipalities with digital data, and a series of planning data sets created and provided by the Southeastern Wisconsin Regional Planning Commission (SEWRPC).

b. Problems acquiring data from state or local sources

In general, Washington County has not had problems acquiring local data provided it exists. Problems tend to arise because each municipality is at a different level of modernization. As a result, some data that would be useful are not accessible because it has not been created or modernized.

Other data, maintained by utilities or non-governmental entities has sometimes been a challenge to acquire

c. Information Transfer

The county will ensure that all Land Information maintained by Washington County is readily translatable for use by any state or local county/agency or public use. Washington County has the ability to convert to commonly used CAD and GIS formats.

Environmental Systems Research Institute, Inc. (ESRI), the County's GIS provider, is a principal member of the Open GeoSpatial Consortium (OGC) and supports all Open GIS and Open Database Compliant (ODBC) specifications. The County expects to have information available in these formats as the vendor provides them. The County does not and can not warrant that all systems comply with these national standards. The county does not and can not warrant that once information is transferred that it will be usable in a system where the design is unknown or the data have been developed to meet a specific purpose.

d. Geographical Referencing

The County uses the North American Datum of 1927 State Plane Coordinate System Wisconsin South Zone as specified by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). SEWRPC has developed conversion algorithms to convert data to other datums used in the state. The program is publicly available from the Commission. ESRI software provides

tools to re-project data to common coordinate systems for public and private users.

2. Operating System Environment and Database Design

The County's GIS system will support all the activities the county plans to do related to land records. The operating system for the GIS is Microsoft Windows (NT and XP) and this operating system should evolve as technology advances. The Washington County primary GIS vendor is ESRI and the primary CAD/Civil vendor is Bentley. Washington County has implemented a Microsoft SQL Server database with ESRI's ArcSDE to maintain all enterprise GIS data. This provides a robust environment to store, update and retrieve data to all levels of GIS access in Washington County.

The database design for land records information conforms where possible with national standards. All integrated land records will be managed in relational databases. The spatial data are topologically structured. FCDC compliant Metadata are maintained for all data using Intergraph's SMMS and/or ESRI's ArcCatalog software.

B. Progress Report on Ongoing Activities

Progress made in the county under the previous plans and the goals and objectives listed in the previous section are as follows:

Goal 1

- Digital parcel mapping for all areas in Washington County is complete. The City of West Bend maintains their parcels. Washington County is responsible for the remainder of the County. The City and County recently worked cooperatively to create a single parcel data model. This facilitates data exchange and analysis.
- Vertical control will be established for approximately 863 Public Land Survey System (PLSS) monuments in Washington County. With the completion of this project in 2005, all PLSS monuments in Washington County will have both horizontal and vertical control.
- The 2002 WLIP grant project will extend contour and planimetric mapping to 18 sections in Southern Washington County.
- In 2005 Washington County will acquire digital topographic mapping for substantial portions of Northeastern and South-central Washington County.

Goal 2

- Maintenance of existing data is on going and part of daily workflows at Washington County. Washington County keeps software and training current to streamline these tasks. Soils, road centerlines, rectified census data, county supervisor and other election data, and shore land/wetland/floodplain data are automated and integrated into the county GIS.
- Digital orthophotography is complete for 1995 and 2000 and will be updated in spring of 2005.

- An optical document imaging system has been implemented in the Register of Deeds and other departments. Efforts to add historic documents to the system are ongoing
- New data continues to be developed as departmental needs arise. This includes the current creation of a database to include all businesses, institutions, schools, and other public facilities.
- The 2002 WLIP grant project will extend detailed floodplain analysis to 30 sections in Southern Washington County

Goal 3

- The process to identify data required for comprehensive planning and possible sources for that data is well underway and ongoing.
- Planning software has been evaluated and studied.
- Wisconsin comprehensive planning grant has been awarded to Washington County and the multi-jurisdictional planning process will start in April 2005

Goal 4

- GIS staff have been included in dispatching hardware and software presentations and actively involved in discussions relating to mapping. GIS will continue to be involved as the Sheriff Department readies to apply for grants.
- The Citywatch automated caller system is installed. GIS staff have assisted, and will continue to assist, as needed with the mapping component.

Goal 5

- The Register of Deeds has acquired the necessary hardware and software to accept electronic documents.
- Washington County has an established enterprise GIS using ESRI ArcGIS, ArcSDE and ArcIMS software. Data is stored in a Microsoft SQL Server database. Enterprise db2 databases are accessible within the GIS.
- The Land Conservation Department is currently using repeatable routines within the GIS software for planning, mapping, and installing a limited number of conservation practices.

Goal 6

- GIS data is available to all county employees through an Intranet mapping application. The public has access to the same application through public terminals located in the County courthouse. Varying levels of access are also given to local municipalities (password protected Extranet) and the general public via the Internet.
- Washington County has acquired Landshark software from Trimin to make Register of Deeds indexes and documents available on the Internet. This application will be rolled out to the public in 2005.
- Washington County has an existing policy in place for digital land information distribution. Fees are set to encourage distribution in the County's native formats.

- Internal data standards and documentation have been developed and implemented. This includes FGDC compliant metadata for all GIS data sets developed and maintained by the County.
- The Planning Division of the Planning and Parks Department is actively promoting partnerships for comprehensive planning.

Goal 7

- The GIS office continues to be the focus of technical support within the county for CAD and GIS software and applications.
- Additional training and education of staff is on going.

Goal 8

- Washington County has received support and resources from a variety of sources including grants and other levels of government.

C. New Initiatives

1. Proposed Projects

The County is continuing its ongoing land records projects as described in the ‘goals and objectives’ and ‘progress report on Ongoing Activities’ sections of this plan.

2. Assistance Requested

No direct assistance from the Wisconsin Land Information Board is requested at this time.

a. Technical Assistance

Washington County is working to develop as much as possible in house technical expertise. The County has Internet connectivity and utilizes the technical assistance list server. Membership in professional organizations and users groups is encouraged. The county will identify and seek additional technical support and training as needed.

b. Local Financing

Washington County plans to use retained fees, the Wisconsin Land Information Board's (WLIB) grant program, as well as county tax levy to fund the activities identified in this plan. The County will continue to pursue other grant opportunities outside of the WLIB and cost sharing opportunities when available.

c. Procurement practices

The Washington County Land Information Advisory Committee and Planning, Conservation, and Parks Committee has always and will continue to follow county ordinances and administrative rules for procurement.

3. Problems Encountered

The problems encountered are minor and have been solved as they arose. In some cases a solution has been developed, but not fully implemented

D. Custodial Responsibilities

Washington County has the same custodial responsibilities for data as other counties in Wisconsin. Following are some of the land records custodial responsibilities listed by department. If a specific statute, ordinance or formal policy confers custody, an indication will appear in parentheses. Washington County is not currently seeking to assume additional custodial responsibility. The county will consider any request for custodial responsibility and evaluate the request based on available and required resources, compatibility with other county data sets, and conformance with the county plan.

Highway

- File right-of-way plats and construction plats
- Digital inventory of signs along all County Highways
- Pavement Surface Evaluation and Rating (PASER) Data for County Highways

Planning and Parks Department

- Maintain countywide street network map
- Maintain description, ownership, and assessment information for all personal and real property (§70.09)
- Maintain parcel maps (§70.09)
- Maintain private sanitary system site plans (§59.69)
- Maintain surface hydrography mapping
- Maintain Shore land/Wetland/Flood Plane Zoning Maps.
- Maintain Economic Development data.
- File Soils maps and tables
- Maintain agricultural field maps
- Watershed maps.

Register of Deeds

- Record and Scan Deeds, Mortgages, Subdivisions, Certified Survey Maps, Condominium and other related documents (§59.43)
- Maintain Tract Index of real property (§59.43)

Surveyor

- Maintain information on PLSS corners including tie sheets (§59.45)
- File private survey maps (§59.45)

Treasurer

- Maintain tax rates and special assessment information (§70.09)
- Maintain tax information for all personal and real property (§29.25)

E. Foundational Elements and State-Wide Standards

1. Communication, Education, Training and Facilitated Technical Assistance

- Staff have attended metadata workshops and maintain FGDC compliant metadata for all databases maintained by GIS staff. Additional data documentation, including procedures manuals, continue to expand.
- The GIS office coordinates training/education opportunities for county departmental staff. This includes monthly meetings of all technical staff who work with spatial data. The county training computer lab is used when appropriate.
- Washington County is connected to the technical assistance list server and WLIB Clearinghouse.
- Land Information Officer Education and Training funds are used to attend WLIA meetings or other relevant training opportunities.

2. Geographic Reference Frameworks

Geodetic Control Networks Public Land Survey System

- Washington County collects and maintains these data and conforms to the standards described in:
 - Standards for Geodetic Reference Systems
 - a) FGCC standards and specifications
 - b) Wis. Stats. Chapter 236.18
 - c) WLIB Specifications and Guidelines to Support Densification of the Wis. High Accuracy Reference Network (HARN) Using Global Positioning System (GPS) Technology - June 1995.
 - Standards for Public Land Survey System Corners
 - a) Corner Remonumentation (Sec. 59.63(1); Sec. 60.84 (3)(c) Wis. Stats).
 - b) Remon. Records (Wis. Stats. (Sec. 59.635(2)(b) and Wis. Admin. Code AE 7.08(2).
 - c) Coordinate Values (FGCC Third Order Class I).
 - Standards for Geographic Control Data
 - a) FGCC Third Order Class II for Horizontal Coordinate Values and Third Order for Elevation Values.
- All of Washington County is remonumented. A control survey network assigning horizontal state plane coordinate values to USPLSS sections corners and quarter corners is complete. Vertical control for all USPLSS section corners and quarter corners will be complete in 2005.
- The County has countywide digital orthophotography from 1995 at 1"=400' compilation scale and from 2000 at 1"=200' compilation scale. Orthophotography will be updated in 2005.

- Digital Terrain Models (DTM) and Contours are available for select areas of Washington County with plans to expand coverage as funding permits. Other data (i.e. Triangulated Irregular Networks) can be derived from the DTM data.

3. Parcel Mapping

- Washington County maintains digital parcel mapping for all areas of the county excluding the City of West Bend. The City of West Bend maintains city parcels. The City and County recently worked cooperatively to create a common data model that is mutually beneficial. This ensures that parcels for all areas of Washington County are maintained in a common data framework.
- The parcel data model used by Washington County includes all required and many optional components of the WLIB Digital Parcel Mapping Standard.
- The United States Public Land Survey system (USPLSS) reference frame is constructed with precision placement of all section and quarter section monuments. USPLSS sections and quarter sections are constructed from the monuments. Washington County parcel maps are constructed with coordinate geometry (COGO) and tied to the USPLSS.
- Washington County's parcel maps are suitable to support property taxes and decision making by employing geodetic reference, topology and parcel identification. The maps are not survey quality.
- Every parcel identified on the map will have a unique local parcel identification number that ties the parcel to all tax databases. The WLIB Parcel Numbering System will be incorporated into the Washington County Land Information System through database manipulation and programming. This would create a lookup table tying the WLIB standard identification number to the local identification number.

4. Parcel Administration

- Washington County is working to complete this information. Any land information system the county develops will support at minimum tax data and parcel ID maintenance.
- By using the local parcel identification number, all parcels are able to be joined to the tax data maintained by Washington County.
- Washington County has had document imaging since 1998. Additional projects have scanned all Subdivisions, all Condominiums, all Certified Survey Maps (CSM), and deeds back to Feb 3, 1992.
- The transfer return form requires a parcel number and this could be used to link the document imaging to the tax records. Washington County is exploring other alternatives to link the tax parcels to the document imaging system.
- Every parcel will have a unique local parcel identification number. The WLIB Parcel Numbering System will be incorporated into the Washington County Land Information System through database manipulation and programming. This would create a lookup table tying the WLIB standard identification number to the local identification number.

5. Public Access

- Washington County provides access to Land Information through the Internet. Municipalities can access a more robust version of the application through a password-protected portal. The general public has access to most data and functions through a separate entry point. Washington County will continue to expand this application and look for additional opportunities to increase public access to land records. Land Records are also made available on CD to individuals or organizations with the capability to use raw GIS data.
- Washington County will consider all state and regional initiatives to provide public access to land records.
- Although no formal data sharing policies exist, Washington County generally provides unlimited free access to GIS data (in its native form) to all local and state governments. This arrangement is usually reciprocated when Washington County is the requester. Data is made available to non-government requesters at cost of reproduction (unless a fee is statutorily required, as is the case with Register of Deeds documents). Washington County does not copyright or license GIS data.
- The Washington County Board has adopted an Internet Privacy Policy that restricts how data are accessed. This policy prohibits search by name queries. This policy is a balance between open access to the data and the privacy of Washington County citizens. All Land Records Internet distribution initiatives are subject to this policy.
- The Washington County Information Services Department handles all matters of system security.
- Washington County has used the \$1 fee designated for land information and housing data to create a land records Internet application and will use these funds to publish Register of Deeds indexes and deeds on the Internet. Future plans include the expansion of existing functionality so local municipalities are able to post assessment data through the Washington County Website on a voluntary basis.

6. Zoning Mapping

- Washington County has incorporated Shore land, Wetland and Floodplain zoning data, created by the Southeastern Wisconsin Regional Planning Commission (SEWRPC), into the county's Geographic Information System. This information is compliant with, and has been distributed to local governments. Additional efforts to improve data integration are included in this plan.
- Washington County is actively seeking opportunities to enhance floodplain mapping as is demonstrated by the proposed 2002 WLIP grant project.
- Other data, including environmental corridors and sewer service areas, are maintained by SEWRPC.
- All data referenced in this section are compatible with local zoning requirements.

7. Soils Mapping

- Washington County received digital soil mapping from the Southeastern Wisconsin Regional Planning Commission (SEWRPC). The digitizing process is not Natural Resources Conservation Service (NRCS) compliant. SEWRPC is currently reviewing the process to bring this data into NRCS compliance.
- Washington has acquired and can use the latest digital soil data available from the US Department of Agriculture, NRCS.

8. Wetlands Mapping

- Washington County incorporated the wetlands delivered by the Southeastern Wisconsin Regional Planning Commission as part of the County's Shore land/Wetland/Flood plain zoning maps. Wisconsin Department of Natural Resource Wetlands are usable in the Washington County GIS.

9. Institutional Arrangements and Integration

- Washington County has an Internal and External Operation Policy that addresses this issue. That policy will be reviewed and updated as the needs and concerns of Washington County citizens change. Currently Washington County has many informal arrangements with local cities, villages, and towns. Washington County will consider any mutually beneficial formal data sharing agreements. No standards have been adopted at this time.

10. Reconciled Election and Administrative Boundary System

- Where districts are based on parcel lines and coded into the tax database, they will be derived from the parcel fabric. These districts include minor civil division boundaries, utility districts, drainage districts, lake management districts, school districts, and other districts with taxing authority.
- Washington County has spatially improved the US Census features and is actively working with the Census Bureau to include these improved geometries in the National TIGER data set.
- Legislative and other election districts including county supervisor and ward plans are derived from spatially enhanced census data conflated to the Washington County road centerline database.
- It is anticipated that this data will be local government compliant.

11. Reconciled Street Address and Street Network System

- Washington County has a street network system digitized using an orthophotograph base. The road segments are coded with street names as well as left and right address ranges. These data have been used for a variety of planning and base mapping applications
- The City of West Bend maintains a point address file for all valid addresses in the City.
- These data will likely require reformatting and expansion before being fully capable of supporting e911 applications. This deficiency is addressed in this plan.

12. Land Use Mapping

- The county has incorporated land use mapping developed by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). This data is traditionally updated every five years with the most recent version from 2000.
- Planned land use for Washington County is available from the SEWRPC Land Use 2020 plan.
- Washington County has local assessment. Land use is maintained by local assessors and linked to the tax roll and parcel mapping by the tax key.
- It is anticipated that this data will be local government compliant.

13. Natural Resources

- Washington County has a watershed data set derived by interpreting 1:24,000 USGS quadrangle maps. The County has a hydrography database that includes all surface water.
- Additional data, including environmental corridors and groundwater mapping is available from the Southeastern Regional Planning Commission and usable in the Washington County GIS.

14. Data Base Design (see Item II.A.2. above for description)

- Washington County has followed industry-accepted standards for database design and system engineering. The county has migrated to and maintains all enterprise GIS data in a relational geodatabase.
- Washington County continues to develop and implement GIS data models. Where appropriate, Washington County has cooperated with local units of government and drawn on vendor and neighboring county resources to complete these tasks.
- Washington County GIS adheres to the Federal Geographic Data Committee (FGDC) Metadata standards as well as additional locally developed data documentation standards.
- All security issues are addressed by the Washington County information Systems Department.

15. Infrastructure and Facility Management

- Road and railroad rights of way are included in the parcel mapping effort. The county also maintains an attributed road centerline database with links to the PASER database. The county is working to incorporate the Wisconsin Department of Transportation local roads data.
- Recreation trails in all Washington County parks are mapped. The county has integrated Ice Age Trail information into the GIS.
- Traffic road signs are inventoried and tracked in the GIS.

F. Integration and Cooperation

The County seeks to develop further relationships with the cities, villages, and towns within the county and any neighboring counties performing similar activities.

The Washington County Land Information data sharing policy is within the spirit of the Wisconsin open records law. This policy provides for a broad range of possibility concerning data exchange. Washington County has developed an Internet based application to help enable less technical municipalities a base level of data access.

Sharing of data and its use both horizontally and vertically is under study.

Over site for the Washington County Land Information Program begins with the Land Information Advisory Committee. This committee consists of representatives from departments with a major stake in the program as well as a county board supervisor and two members not affiliated with County government. The makeup of this committee alone helps ensure that all departments and municipalities benefit from the program. Those without membership on the committee can, and have, suggest projects. When the request comes from local municipalities, the request generally comes in the form of a cost sharing proposal.

When possible, data acquisition projects cover the entire county. On occasion, costs prohibit this practice. Completing countywide data will help ensure that all municipalities benefit from the derived product.

G. Administrative Standards Not Associated With Foundational Elements

1. Washington County agrees to observe and follow the statutes relating to the Wisconsin Land Information Program and other relevant statutes, as described in written materials provided by the Wisconsin Land Information Board.
2. Washington County agrees to permit the Wisconsin Land Information Board access to books, records and projects for inspection and audit including unannounced audits by the board.
3. Washington County agrees to complete the Annual WLIP Survey.
4. Washington County will update this plan every 5 years, more frequently if changes to this plan become necessary.
5. The Wisconsin Land Information Board agrees to facilitate technical assistance to the county including an on-line Technical Assistance Service.
6. The Wisconsin Land Information Board agrees to maintain and distribute an inventory of land information and land information systems for the state. This will be provided through an electronic clearinghouse.
7. 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.
8. The Wisconsin Land Information Board agrees to review funding requests and to provide guidance to local government with respect to the development of such requests.
9. The Wisconsin Land Information Board agrees to make available electronically on an annual basis, an Annual Report regarding the status of the Wisconsin Land Information Program and the activities of the Board.

H. Timeline

Goals and Objectives	2005				2006				2007				2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Goal 1: Implement a multipurpose, multi-user, parcel-based LIS																				
Goal 2: Expand and enhance data and integrate GIS countywide																				
Objective 2A: Maintain all existing Land Information																				
Objective 2B: Participate in ground water studies.																				
Objective 2C: Improve zoning and natural resource data.																				
Objective 2D: Develop and implement monument maintenance procedures																				
Objective 2E: Acquire new orthophotography																				
Objective 2F: Preserve and convert ROD documents																				
Objective 2G: Scan Surveyor Files																				
Objective 2H: Health Dept. Facilities Database																				
Goal 3: Acquire, hardware, software and data for Comprehensive Planning																				
Objective 3A: Enhance existing data for comprehensive planning																				
Objective 3B: Identify and acquire or create additional data for comprehensive planning																				
Objective 3C: Share data for Comprehensive Planning																				
Objective 3D: Acquire software for Comp. Planning																				
Goal 4: Expand GIS to Sheriff Department applications																				
Objective 4A: Wireless 911 Phase II Mapping																				
Objective 4B: Incident Mapping																				
Objective 4C: Automated Calling System mapping support																				
Goal 5: Implement new hardware, software, and custom applications.																				
Objective 5A: Integrate GIS and Document Imaging System																				
Objective 5B: Continue Register of Deeds e-filing system support																				
Objective 5C: Develop Land Conservation Applications																				
Objective 5D: Integrate county permitting data																				

Goals and Objectives	2005				2006				2007				2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Goal 6: Promote integration and access to land records																				
Objective 6A: Enhance and support Internet Application																				
Objective 6B: Internet access to Register of Deeds Documents																				
Objective 6C: Internet access to assessor data																				
Objective 6D: Data distribution and privacy policy																				
Objective 6E: Data standards, metadata, and data documentation																				
Objective 6F: Seek data sharing opportunities and agreements																				
Objective 6G: Use GIS for Comp. Planning public participation																				
Objective 6H: Cooperate with State and Regional Initiatives																				
Goal 7: Provide planning, training, and technical support for the GIS program																				
Objective 7A: Encourage attendances at conference and users' groups																				
Objective 7B: Provide technical GIS training for county staff																				
Goal 8: Seek various funding sources for land records projects																				
Objective 8A: Pursue cooperative funding and cost sharing																				
Objective 8B: Pursue grants and other funding sources																				