

Land Information Plan

Iowa County, Wisconsin 2010-2015

**Copies are available from the Iowa County Office of Planning and Development, 222 N. Iowa St. , Dodgeville, WI 53533 (608)935-0398.
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I. Executive Summary

A. Overview of Iowa County

Iowa County was created by a legislative act in 1829, nineteen years before Wisconsin became a State. Wisconsin's oldest operative courthouse, erected in 1859, stands in the county seat, Dodgeville. Early land records still on file in Iowa County provide a substantial trail of Wisconsin history. The original plat for the Village of Four Lakes, now Madison, was filed in 1836 in Mineral Point when that community served as the county seat for the area. It included what is now our State Capital and that plat is now prominently displayed at the Iowa County Courthouse. This is mentioned to emphasize that land records, past and present, in the custody of Iowa County are important, and will continue to be preserved with respect and responsibility.

The population of Iowa County is 22,780, according to the 2000 census, and there are county-wide just over 30,000 parcels identified. The county covers 761 square miles and contains 14 townships, all or part of 13 villages, and 2 cities.

The purpose of this plan is to provide guidance on the creation, maintenance, design and improvement of the way in which land information is developed, stored and accessed in Iowa County. Because land information can and does include a wide spectrum of data types, applications, sources, formats, etc., coordination, cooperation and communication are vital to the successful implementation of a land records program. This plan is intended to foster these efforts

The plan serves to guide policy on how land information is created, maintained and distributed by Iowa County. It further serves to describe the county's history, progress and goals in land records modernization as being compatible with the foundational elements established within the Wisconsin Land Information Program.

It is the intention that this plan will provide any reader with a clear, concise direction in locating land records information as well as an understanding of the goals and objectives of Iowa County's land records modernization efforts. Because this is a 5-year plan, it is understood that Iowa County may amend it as needed to reflect changes in technology, funding and administration.

Iowa County has benefited from every aspect of the Wisconsin Land Information Program. The Program has facilitated greater efficiency among county departments and cooperative efforts between the county and local jurisdictions.

B. Participants in Planning Process

The Iowa County land records program is administered by the Iowa County Office of Planning & Development with oversight by the Economic Development, Education and Property Committee and County Board of Supervisors. Several county offices and officers provide ideas

and guidance to the Committee, including the following who contributed to this planning process:

| | |
|--------------------------------------|-------------------------|
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The county's land information website is linked from the Office of Planning & Development webpage at www.iowacounty.org and follow the link "GIS Website". At present, there are no municipal websites that serve land information.

II. Land Information Plan

A. Goals and Objectives

The goals and objectives of this plan are based on the foundational elements established in the Wisconsin Land Information Program and are reviewed at least once every five years, as is the entire plan. They should be used as the basis for decision-making that impacts the county's land information program as well as be a tool for evaluating the status of the program.

Goal 1: Improve the accuracy, consistency and access of parcel-based land information

- a) Objective: Assess the value of Iowa County's GIS website to users and propose changes to enhance its value.
- b) Objective: Review interdepartmental coordination and workflows to assure efficiency and effectiveness in data development and maintenance.
- c) Objective: Review policies for access to land information against the user's expectations and public concerns over privacy.
- d) Objective: Utilize recently acquired engineering-grade global positioning system and associated software to increase accuracy of land information
- e) Objective: Continually evaluate current and proposed data formats and software

applications for interconnectivity, cost effectiveness and ease of data sharing

Timeline: ongoing

Goal 2: Incorporate countywide groundwater survey data into program

- a) Objective: Assess user needs of data
- b) Objective: Determine most effective and useful means for providing access
- c) Objective: Develop process for maintaining and updating data
- d) Objective: Effectively promote use of data

Timeline: 2011

Goal 3: Increase use of the Geographic Information System by county offices and officers

- a) Objective: Develop ongoing, regular training workshops for county employees
- b) Objective: Annually assess potential application of GIS in individual office workflows
- c) Objective: Increase employee efficiency
- d) Objective: Maintain usefulness of GIS by continual evaluation of functionality and data content

Timeline: ongoing

Goal 4: Develop collaborations between county offices, units of government and interested private entities that are mutually beneficial

- a) Objective: Maintain and enhance interdepartmental collaboration, cooperation and communication
- b) Objective: Establish process by which expenditures related to land records are reviewed for consistency and compatibility with existing land record formats and delivery platforms
- c) Objective: Establish policies that promote data sharing

Timeline: ongoing

B. Progress Report on Ongoing Activities

1. Accuracy, Consistency, Access

Hand-held and survey-grade global positioning equipment will be used to increase the accuracy of the representation of physical attributes throughout the county in our mapping. Some of the planned applications include the location of highway right-of-way, easements, culverts, signs, bridges, private septic systems, private septic system soil tests, section corners, and accident scenes. It is also anticipated that this technology will assist in helping to determine relative elevations as it applies to floodplain zoning regulations.

Current coordinates are provided in the county coordinate system. Consideration will be made to also providing longitudinal and latitudinal coordinates on the County GIS website to facilitate

the use of our GIS data by both professional and amateur GPS users. Creation and periodic maintenance of a countywide network of horizontal and vertical control points or stations is planned.

The maintenance of parcel mapping will continue to be a daily workload priority. The current policy of providing updated data to the GIS website on an annual basis will be reviewed to be sure it remains adequate to meet public expectations for data quality, relevance and timeliness. This review will also consider what information will be provided on the GIS website in regards to any public expectations of privacy.

2. Countywide Groundwater Survey Data

A 3-year countywide groundwater study in cooperation with the UW Extension and Wisconsin Geological & Natural History Survey will soon yield a plethora of useful data relating to groundwater depth, direction of flow and recharge capabilities. The study will construct a three-dimensional groundwater flow model of the hydrogeologic system in Iowa County. It will also provide data that will simulate all significant aquifers and aquitards with their connections to the Wisconsin and Pecatonica Rivers and major tributaries.

The goal is to promote this data for use by local officials, water resource managers, residents, developers, and consulting engineers. We expect to begin taking delivery of this data in 2010 and will begin developing prioritized applications.

3. Increase Use of GIS

Currently, all county offices have access to the geographic information system, yet only a handful of offices use it on a regular basis. There was a concerted effort at educating and training individual offices when the GIS was first made available. This effort will be renewed as the system has increased in its capabilities and there have been staffing changes over the past few years.

4. Develop Collaborations

Effort should continuously be made to get the best value for the investment of public dollars, especially in the current economy. To that end it is imperative that the county consider every opportunity to collaborate with other counties as well as local and state agencies. Where appropriate, partnerships with quasi-public and private entities should be established. The present sharing of data with the Southwest Wisconsin Regional Plan Commission for use on a regional basis is a good example of collaboration that will be encouraged.

C. New Initiatives

Proposed Projects

1. LiDAR – Light Detection and Ranging

Iowa County has been awarded a \$299,992 Community Development Block Grant – Emergency Assistance Program grant to acquire LiDAR data. This data will enable 2-foot contour mapping of the county and will be openly shared with the public.

2. Digital Conversion of Microfiche

The Iowa County Register of Deeds Office is undertaking a project, with the benefit of Wisconsin Land Information Program grant money, involving the conversion of 50 volumes of documents to approximately 50,000 digital images that can be made more easily and readily accessible to the public. This project will begin in 2010.

3. Wisconsin Regional Orthophotography Consortium

Iowa County is participating in this effort to obtain a countywide 2010 flight of digital Orthophotography. The resulting 18-inch resolution color Orthophotography will replace the existing 18-inch resolution black and white 2005 photography as a base layer in the GIS. We anticipate the flight will occur in 2010 with final product delivery in 2011.

4. GIS Website Enhancements

Efforts are underway to provide the following additional functionality to the county's GIS website:

- Link zoning reports and information to zoning polygons
- Display latitude and longitude coordinates below active layer
- Hyper link section corner tie sheets
- Add 4 or 5 data layers associated with the countywide groundwater study

5. Incorporation of Imagery in GIS

There is a desire by GIS users to be able to view imagery of permits and other documents that are associated with specific parcels. Potential imagery will be prioritized and a strategy adopted for incorporating it into the GIS.

Assistance Requested

There is a significant need for the establishment of statewide standards relating to which public records must be available via a community's website and what can be charged in fees for requested copies of said information. Current statutes have not been revised since the advent of digital land information, which puts the burden on individual governmental jurisdictions to determine what information is available in what format and for what price. This has resulted in inconsistency and continued litigation. The Department of Administration can provide a leadership role in resolving these issues.

Problems Encountered

Maintaining an understanding of the program initiatives and players has been a challenge. Keeping the county board and local officials informed of these can be even more difficult, especially given the regular turnover of members due to elections.

Funding is always a challenge, especially in this era of tight county budgets. However, the opportunity for WLIP grant money has enabled Iowa County to achieve the progress that we have. The WLIP has been invaluable to this effect.

Finding an acceptable balance between privacy concerns and the desire for unfettered access to public records via the GIS is a challenge. The lack of clear guidance from state statute provides the opportunity for subjective values in the local decision making that conflict with those of data requesters.

The use of the county's GIS by county offices has not developed as fully or quickly as desired. The result is missed opportunities for efficiency and some duplication of efforts. Regardless, the effort to promote the understanding and use of GIS will continue.

D. Custodial Responsibilities

The following departments have custodial responsibilities for the indicated land records:

Highway Department pertaining to State and County Trunk Routes only - §82 to 86

- Highway Road and Bridge construction plans
- Highway Signs Inventory
- Highway Bridge Inventory
- Highway Culvert Inventory
- Highway Guardrail Inventory
- Right-of-way plats and construction easement documents
- Work with townships to obtain Town Road Infra-structure Inventories

Register of Deeds Office - §59.43

- Recorded deeds, mortgages, plats, certified survey maps and all other associated records
- Tract index of recorded documents
- Grantor/Grantee indexing system
- Survey maps and records performed by County Surveyors, past and present
- Monument record sheets and summary sheets on the PLSS corners in the county
- Document imaging web access

Planning Office - §59.69; §29.692; §59.694; §87.30; §59.54; §59.03; §59.04; §114.14; §114.36; §59.70; §145.04; §145.19; §145.20; §245; Comm 83; NR115; NR116

- GIS base map layers
- Permit database
- Zoning maps for unincorporated areas
- Digital parcel maps
- Aerial photos and Orthophotography

- USGS 7.5 minute quad maps
- Public hearing information
- Wetland maps
- Property address database
- Public road names
- Proposed development plans
- Comprehensive Planning information and enacted plans
- Private sanitary system site plans
- Soil maps

County Treasurer- §59.25; §70.09

- Maintain tax information for all parcels

Land Conservation Department - §281; NR120

- Maintain soils information, including maps (USDA permanent)
- Maintain water quality information (§281 & NR120)
- Maintain county land conservation plans and activities (USDA permanent)

E. Foundational Elements and Statewide Standards

1. Communication, Education, Training and Facilitated Technical Assistance

Documentation of county data: All data layers include metadata to document the source, accuracy and parameters of data.

WLIA training: Continue to participate in training opportunities offered by the Wisconsin Land Information Association.

Resources available: Brochures have been created to illustrate the operation and use of the county's GIS, designed for public and private users. Workshops and open houses will continue to be employed as education tools.

Identification of customer needs: Open houses and website feedback provide input from users on data needs. In addition, we make an effort to attend every local municipal governing body meeting at least once a year to gain feedback.

Use of technology to facilitate education and training: We have access to a satellite down link facility, the UW-Extension ETN system and the internet

Through the Internet, Iowa County will continue to use and access the WLIP Land Information Clearinghouse and Technical Assistance List Server. All departments utilizing land records will have secured access to the land records server. Iowa County provides for education and training in land records technology on a departmental basis. Emphasis will be on dissemination of information among departments. Land Information

Officer education and training funds will continue to be used to that effect. Iowa County will comply with standards adopted for use of the Clearinghouse and Technical Assistance List Server.

Use of Land Information Officer education and training funds: Use of these funds will continue to be used by the LIO or his/her designee to attend WLIA regional workshops and/or annual conferences.

2. Geographic Reference Framework

In 1995 Iowa County established control points for the rectification of Orthophotography using the Wisconsin HARN WGS 84 Sub. (91). Iowa County was subject to the Height Modernization program in 2003, consisting of approximately 50 points having been established throughout the County.

There will be a 2010 update of Orthophotography resulting in an 18-inch resolution, color product.

The present 10-foot contour coverage will be enhanced to 2-foot as a result of a 2010-2011 Light Detection and Ranging (LiDAR) project being funded with a Community Development Block Grant Emergency Assistance Program grant.

The recent acquisition of both recreational-grade and engineering-grade global positioning system hardware and associated software will enable the county to provide an accurate representation of physical attributes throughout the county.

Wireless E911 support has begun in Iowa County and will continue to be enhanced as technologically and economically feasible.

3. Parcel Mapping

Iowa County is current with digital parcel mapping and has the ability to link to database information for enhanced functionality and capabilities. Parcel maintenance will be an ongoing priority.

The parcel mapping is suitable for and currently being used for comprehensive and issue-specific planning processes.

The mapping accuracy is enhanced by section corner coordinates, although the entire county is not monumented. And, not all of the field section corner monuments have county coordinates attached thereto. There is the potential to use the survey-grade global positioning equipment to re-establish the missing section corners and determine the respective coordinates. In addition, completion of this project will allow computation of section summaries of all sections in the county.

The Iowa County parcel identification numbers comply fully with the parcel numbering

system endorsed by the WI Land Information Board.

4. Parcel Administration

The Iowa County Register of Deeds office has a document imaging system in operation since 1999 and upgraded in 2009 to an internet-based site. Parcel maps include unique parcel identification numbers and information on ownership, area, location, tax values, address and recording documentation.

The tax database can be queried by parcel identification number and can be linked to the GIS parcel coverage.

5. Public Access

Iowa County provides public access to land records information through two terminals located in the courthouse. We will evaluate whether this is an adequate number of terminals to serve the public's needs. The county has also developed a GIS website, which is available via the internet; although currently there is some personally identifiable information blocked from the site for purposes of privacy, such as parcel ownership. We will review the availability of all public records for consistency with the Wisconsin Open Records Law and public wishes.

There is a distribution policy in place that addresses copyrighted data, data format and fees. Iowa County reserves the copyright of data it creates. There are also policies that establish product request fees and data sharing agreements. We will review these policies for consistency with the Wisconsin Public Records Law, recognized industry standards and the public wishes.

The vendor server and internal AS400 have built-in firewalls and other security measures monitored by the Information Systems Department.

The county utilizes the \$1 fee designated for land information and housing data per Sec. 59.72(5)(b)3 by maintaining computerized indices for housing available in the Iowa County Comprehensive Plan adopted in 2005 per Ch. 66.1001 WI Stats. These funds are also used to maintain the GIS website and public terminals.

6. Zoning Mapping

Zoning mapping for all unincorporated areas of the county are kept and maintained as a GIS data layer. This includes general zoning, shoreland zoning and floodplain zoning maps. The official floodplain zoning maps, called the Floodplain Insurance Rate Maps, continue to be in hardcopy until such time an accurate digital version can be certified by the Federal Emergency Management Agency.

7. Soils Mapping

Iowa County has a hardcopy countywide soil survey completed in 1958. This survey was digitized in 2000 and is provided as a GIS data layer. The County will review the capability to link this information to the NRCS web soil survey database for easier access.

8. Wetlands Mapping

Iowa County presently uses existing hardcopy maps from the WI-DNR inventory and has obtained a digital format from the WI Department of Natural Resources.

9. Institutional Arrangements

Iowa County currently has a verbal cooperative agreement with many local municipalities to provide digital parcel mapping in return for low-level flight digital orthophotography. Iowa County will continue to encourage cooperative efforts with its municipalities adjoining counties whenever feasible and practical.

10. Reconciled Election and Administrative Boundary System

Iowa County currently has a digital format of the supervisory district map.

11. Reconciled Street Address and Street Network System

Iowa County has a digital map of current street addresses which employs road centerlines, address annotation, address points located at the end of driveways and road names. A more accurate geodatabase will be developed for use in the Computer Aided Dispatch system.

The county maintains authority by ordinance for approval of all public and private road names in order to be compatible with the county's E911/Computer Aided Dispatch system.

12. Land Use Mapping

The current official land use map for the unincorporated areas of the county are the individual township land use maps as adopted in the Iowa County Comprehensive Plan.

13. Natural Resources

Iowa County has a natural resource map adopted as part of its comprehensive plan. This map will be supplemented with extensive hydrogeologic information currently being developed by a countywide groundwater study. There are 23 nonmetallic mines permitted under the provisions of NR135 and the county's nonmetallic mining ordinance which have been developed into a GIS data layer linked to imagery of reclamation documents.

14. Database Design

The Iowa County database design was developed in May 2005. Iowa County will maintain, evaluate and enhance the database design to support the GIS functionality as necessary. As the database design is maintained and enhanced, Iowa County will continue to revise and/or develop metadata associated with the data layers in accordance to the Federal Geographic Data Committee (FGDC) standard. Metadata shall be available upon request to the Office of Planning and Development or via the Iowa County GIS Website.

The geodatabase is stored on an internal sequel server, used solely for the purpose of

hosting the Iowa County geodatabase. An additional network server stores the orthophotography and alternate data such as Microstation files, shape files, personal geodatabases and raster images. The Sheriff's Department also has a separate network server to store the address data used for the Computer Aided Dispatch System. Access to the hardware such as the servers and network drives is limited by the IS department.

15. Infrastructure & Facility Management

The parcel mapping process includes identification of recreational trails, railroads, airports and government facilities. The Highway Department anticipates creating data layers of infrastructure such as bridges, culverts, signs, guardrail, highway classifications, traffic volumes, intersections, etc. The Department also anticipates creation of data layers for the various watersheds attributable to the large culvert and bridge structures throughout the county system of highways.

16. Orthoimagery and Georeferenced Image Base Data

- a. Photogrammetric base maps: datalayers are created in conjunction with the 2005 digital Orthophotography and will be compared to the 2010 photos
- b. Digital Orthophotography: Iowa County acquired 18" black and white imagery as a member of a multi-county consortium in 1995 and 2005. The county is participating in the 2010 WROC and is acquiring 18" color imagery. The county regularly uses multiple years of freely available imagery from the USDA National Aerial Imagery Program, made available by the WisconsinView program. No municipalities in the county participated in the 2010 WROC to acquire higher resolution imagery.
- c. Digital raster graphics: digital raster graphics are not maintained by the county
- d. Satellite imagery: the county does not utilize satellite imagery
- e. Oblique aerial imagery: the county does not utilize oblique aerial imagery
- f. Historical aerial imagery: the county has aerial imagery from 1957, 1968, 1995, 2005, 2008 and 2010

17. Elevation Data Products and Topographic Base Data

- a. Digital elevation models: the county is anticipating maintaining a DEM after delivery of LiDAR data in 2011
- b. Digital terrain models: the county currently has a 10-foot DTM but anticipates to have a 2-foot product after delivery of LiDAR data in 2011
- c. Triangulated irregular networks: the county is anticipating maintaining a TIN after delivery of LiDAR data in 2011
- d. Contours: the county has traditionally only stored 10 foot interval contour line data, but hopes to increase that to 2' after it receives LiDAR data in 2011
- e. LIDAR data: the county anticipates delivery of LiDAR data in 2011
- f. IFSAR data: the county does not maintain IFSAR data

F. Integration and Cooperation

Iowa County has been active with local government and the private sector. Data exchange will continue to be developed and to make efforts to review additional cooperative possibilities.

Potential partners continue to be regional counties, local municipalities and state agencies. Such partnerships typically involve the sharing of data coverages as equal exchange or, in the case of the current county-wide groundwater study being conducted, the county will provide base orthophotography and other coverages in exchange for mapped study results from the UW-Extension and U.S. Geologic Survey.

The county continues to promote the use of the county's GIS by local jurisdictions and agencies by participating in data sharing and maintenance agreements.

G. Technical Standards Not Associated with Foundational Elements

(1) METADATA

Iowa County follows the Federal Metadata standards.

(2) PROCUREMENT

Iowa County will continue to follow procurement procedures established by the County Board of Supervisors.

(3) IMAGING STANDARDS

Iowa County presently adheres to all of the applicable statutory and administrative standards and guidelines for imaging.

H. Administrative Standards Not Associated With Foundational Elements

1. The County agrees to observe and follow the statutes relating to the Wisconsin Land Information Program and other relevant statutes.
2. The County agrees to permit the State access to books, records and projects for inspection and audit including unannounced audits.
3. The County agrees to provide an Annual Status Report of Plan progress requested herein and to keep the Plan up to date. The report will be administered electronically.
4. The County agrees to complete the Annual WLIP survey.
5. Development and implementation of an acceptable Plan confer certain benefits on local government within a county, including continued eligibility for Program funding. A self-approving peer process will be used to assess Plan acceptability by the land information community.
6. The County agrees to participate in voluntary peer review processes to assess plan acceptability.
7. The County acknowledges the items expected from the WI Land Information Board as laid out in the Plan Instructions (Items 5, 6, 8 and 9).