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</tbody>
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EXECUTIVE SUMMARY

About this Document. This document is a land information plan for Green Lake County prepared by the Land Information Office and reviewed and approved by the Land Information Council. By Wisconsin statute, “a countywide plan for land records modernization” is required for participation in the Wisconsin Land Information Program (WLIP). The purpose of this document is:

1) to meet WLIP funding eligibility requirements necessary for receiving grants and retaining fees for land information
2) to plan for county land records modernization in order to improve the efficiency of government and provide improved government services to businesses and county residents
3) to identify through land records modernization cost reductions realized by eliminating duplicate record keeping and implementing efficient processing of land records

WLIP Background. The WLIP, administered by the Wisconsin Department of Administration, is funded by document recording fees collected by register of deeds at the county-level. In state fiscal year 2015 (July 1, 2014 through June 30, 2015) Green Lake County retained $28,088 in local register of deeds document recording fees and received a $71,912 WLIP Base Budge Grant since retained fees were less than $100,000 plus a Training and Education grant of $1,000. Beginning in 2016, WLIP Strategic Initiative grants are projected to increase the county land information funding by $50,000 per year (to be prioritized for the purposes of parcel dataset improvement). This totals $151,000 annually for land information.

The ROD (Register of Deeds) recording fee is $30. $15 is retained as ROD designated, $8 is retained designated for land information (only the $8 is used to calculate the Base Budget Grant), and $7 goes to the state land information fund (part of which is granted back to counties).

This plan lays out how funds from grants and retained fees will be prioritized. However, as county budgets are determined on an annual basis with county board approval, this plan provides estimated figures that are subject to change and are designed to serve planning purposes only.

Land Information in Green Lake County. Land information is central to county operations, as many essential services rely on accurate and up-to-date geospatial data and land records. A countywide land information system supports economic development, emergency planning and response, and a host of other citizen services. The Green Lake County land information system integrates and enables efficient access to information that describes the physical characteristics of land, as well as the property boundaries and some regulatory limitation attributable to landowners.

Land Information Council Three-Year Mission Statement. Green Lake County desires continued development of a land records system that benefits a wide range of users. As data is incorporated into the land records system it shall be monitored regularly to increase the efficiency of land records maintenance and management through the improvement of land records accuracy and completeness.

Projects Summary. To realize this mission, in the next three years, the county land information office will focus on the following projects:

1. Digital Parcel Mapping
2. PLSS Remonumentation
3. Other Parcel Work
4. LiDAR (2025)
5. Orthoimagery (2020)
6. Address Points & Street Centerlines
7. Software/Hardware/Website
8. Training and Education

The remainder of this document provides more details on Green Lake County and the WLIP, summarizes current and future land information projects, and reviews the county’s status in completion and maintenance of the WLIP map data layers known as Foundational Elements.
INTRODUCTION

In 1989, a public funding mechanism was created whereby a portion of county register of deeds document recording fees collected from real estate transactions would be devoted to land information through a new program called the Wisconsin Land Information Program (WLIP). The purpose of the land information plan is to meet WLIP requirements and aid in county planning for land records modernization.

The WLIP and the Land Information Plan Requirement
In order to participate in the WLIP, counties must meet certain requirements:

- Update the county’s land information plan at least every three years
- Meet with the county Land Information Council to review expenditures, policies, and priorities of the land information office at least once per year
- Report on expenditure activities each year
- Submit detailed applications for WLIP grants
- Complete the annual WLIP survey
- Subscribe to DOA’s land information listserv
- Meet a June 30, 2017 deadline to post certain types of parcel information online

Any grants received and fees retained for land information through the WLIP must be spent consistent with the county land information plan.

Act 20 and the Statewide Parcel Map Initiative
A major development for the WLIP occurred in 2013 through the state budget bill, known as Act 20. It directed the Department of Administration (DOA) to create a statewide digital parcel map in coordination with counties.

Act 20 also provided more revenue for WLIP grants, specifically for the improvement of local parcel datasets. The WLIP is dedicated to helping counties meet the goals of Act 20 and has proposed that funding be made available to counties in the form of Strategic Initiative grants to be prioritized for the purposes of parcel dataset improvement. For Strategic Initiative grant eligibility, counties will be required to apply WLIP funding toward achieving certain statewide objectives, specified in the form of “benchmarks.” Benchmarks for parcel data—standards or achievement levels on data quality or completeness—are determined through a participatory planning process and will be detailed in future WLIP grant applications.

County land information plans were initially updated every five years. However, as a result of Act 20, counties must update and submit their plans to DOA for approval every three years. Thus, the minimum planning horizon for these documents is three years. The plan may incorporate a planning horizon that is longer if the needs and priorities of the participants warrant.

County Land Information System History and Context
The Land Information Office (Register of Deeds) and Land Information Committee were established in 1990 by Resolution 30-1990. The Land Use Planning & Zoning Dept. became the Land Information Office by Res. 17-2005 to coincide with the Land Information Officer. The Land Information “Committee” was replaced by the Land Information “Council” by Res. 28-2010.
Plan dates:
1998-2004 Res. 06-1999
2005-2010 Res. 16-2006
2011-2015
2016-2018
2019-2021

Plan Participants and Contact Information

Another requirement for participation in the WLIP is the county Land Information Council, established by legislation in 2010. The council is tasked with reviewing the priorities, needs, policies, and expenditures of a land information office and advising the county on matters affecting that office.

According to s. 59.72(3m), Wis. Stats., the county Land Information Council is to include:
- Register of Deeds
- Treasurer
- Real Property Lister or designee
- Member of the county board
- Representative of the land information office
- A realtor or member of the Realtors Association employed within the county
- A public safety or emergency communications representative employed within the county
- County surveyor or a registered professional land surveyor employed within the county
- Other members of the board or public that the board designates

The Land Information Council must have a role in the development of the county land information plan, and while s. 59.72 Wis. Stats. does not require any entity approve the plan, DOA requires county Land Information Councils to approve final plans. A record documenting county Land Information Council approval should be included in the final submission of the plan to DOA. County Board approval of plans is encouraged but not required.

A county may amend a plan with updates or revisions as appropriate. If amended, a digital copy of the amended plan and record of Land Information Council approval should be sent to the WLIP.

This plan was prepared by the county Land Information Office and reviewed and approved by the Land Information Council as listed below.

### County Land Information Council

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Dept</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack Meyers, Chair</td>
<td>County Board Chair</td>
<td></td>
<td><a href="mailto:jmeyers@co.green-lake.wi.us">jmeyers@co.green-lake.wi.us</a></td>
<td>920-294-4031</td>
</tr>
<tr>
<td>Sarah Guenther, Vice-Chair</td>
<td>Register of Deeds</td>
<td>Register of Deeds</td>
<td><a href="mailto:sguenther@co.green-lake.wi.us">sguenther@co.green-lake.wi.us</a></td>
<td>920-294-4024</td>
</tr>
<tr>
<td>Marge Bostelmann, Secretary</td>
<td>County Clerk</td>
<td>County Clerk</td>
<td><a href="mailto:mbostelmann@co.green-lake.wi.us">mbostelmann@co.green-lake.wi.us</a></td>
<td>920-294-4007</td>
</tr>
<tr>
<td>Betsy Amend</td>
<td>Treasurer/ Real Property Lister</td>
<td>Treasurer</td>
<td><a href="mailto:bamend@co.green-lake.wi.us">bamend@co.green-lake.wi.us</a></td>
<td>920-294-4019</td>
</tr>
<tr>
<td>Henry Conti</td>
<td>Realtor</td>
<td>Private sector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paul Gunderson</td>
<td>County Conservationist</td>
<td>Land Conservation</td>
<td><a href="mailto:pgunderson@co.green-lake.wi.us">pgunderson@co.green-lake.wi.us</a></td>
<td>920-294-4055</td>
</tr>
<tr>
<td>Laura Polcyn</td>
<td>Communications</td>
<td>Sheriff</td>
<td><a href="mailto:lpolcyn@co.green-lake.wi.us">lpolcyn@co.green-lake.wi.us</a></td>
<td>920-294-4134</td>
</tr>
<tr>
<td>Al Shute</td>
<td>Land Information Office/ County Surveyor</td>
<td>Land Use Planning &amp; Zoning</td>
<td><a href="mailto:ashute@co.green-lake.wi.us">ashute@co.green-lake.wi.us</a></td>
<td>920-294-4175</td>
</tr>
<tr>
<td>Gerald Stanuch, LIO (LIO)</td>
<td>Land Information Office/ GIS Specialist</td>
<td>Land Use Planning &amp; Zoning</td>
<td><a href="mailto:gstanuch@co.green-lake.wi.us">gstanuch@co.green-lake.wi.us</a></td>
<td>920-294-4174</td>
</tr>
</tbody>
</table>
2 FOUNDATIONAL ELEMENTS

Counties must have a land information plan that addresses development of specific datasets or map layer groupings historically referred to as the WLIP Foundational Elements. Foundational Elements incorporate nationally-recognized “Framework Data” elements, the major map data themes that serve as the backbone required by users to conduct most mapping and geospatial analysis.

In the past, Foundational Elements were selected by the former Wisconsin Land Information Board under the guiding idea that program success is dependent upon a focus for program activities. Thus, the Uniform Instructions place priority on certain elements, which must be addressed in order for a county land information plan to be approved. Beyond the county’s use for planning purposes, Foundational Element information is of value to state agencies and the WLIP to understand progress in completion and maintenance of these key map data layers.

PLSS
Public Land Survey System Monuments
Layer Status
- For the PLSS Foundational Element, the table below documents Layer Status

<table>
<thead>
<tr>
<th>PLSS Layer Status</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of PLSS corners (section, quarter, meander, center) in original government survey</td>
<td>1,721</td>
</tr>
<tr>
<td>Number and percent of PLSS corners that have been remonumented</td>
<td>1,281/1,721=74%</td>
</tr>
<tr>
<td>Number and percent of remonumented PLSS corners with survey grade coordinates (see below for definition)</td>
<td>1,281/1,281=100%</td>
</tr>
<tr>
<td>Number and percentage of survey grade PLSS corners integrated into county digital parcel layer</td>
<td>1,154/1,281=90%</td>
</tr>
<tr>
<td>Number and percentage of non-survey grade PLSS corners integrated into county digital parcel layer</td>
<td>1,721-1,281=440 440/440=100%</td>
</tr>
<tr>
<td>Percentage of PLSS corners that have digital tie sheets (whether or not they have corresponding coordinate values)</td>
<td>1,507 total tie sheets, 371 corners without a tie sheet 1,507+371=1,878 total corners 1,878-1,721=157 corners not numbered 1,721-371=1,350 1,350/1,721=78%</td>
</tr>
<tr>
<td>Digital tie sheets available online? Yes or No</td>
<td>Yes</td>
</tr>
<tr>
<td>Approximate number of PLSS corners believed to physically exist based on filed tie-sheets or surveys, but do not have coordinate values</td>
<td>0</td>
</tr>
<tr>
<td>Approximate number of PLSS corners believed to be lost or obliterated</td>
<td>440</td>
</tr>
</tbody>
</table>
| Total number of PLSS corners along each bordering county | Columbia 27  
Dodge 13  
Fond du Lac 37  
Marquette 58  
Waushara 31  
Winnebago 13 |
Number and percent of PLSS corners remonumented along each county boundary

<table>
<thead>
<tr>
<th>County</th>
<th>Number</th>
<th>Remonumented %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia</td>
<td>26/27</td>
<td>96%</td>
</tr>
<tr>
<td>Dodge</td>
<td>13/13</td>
<td>100%</td>
</tr>
<tr>
<td>Fond du Lac</td>
<td>32/37</td>
<td>86%</td>
</tr>
<tr>
<td>Marquette</td>
<td>42/58</td>
<td>72%</td>
</tr>
<tr>
<td>Waushara</td>
<td>26/31</td>
<td>84%</td>
</tr>
<tr>
<td>Winnebago</td>
<td>07/13</td>
<td>54%</td>
</tr>
</tbody>
</table>

Number and percent of remonumented PLSS corners along each county boundary with survey grade coordinates

<table>
<thead>
<tr>
<th>County</th>
<th>Number</th>
<th>Remonumented %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia</td>
<td>26/27</td>
<td>96%</td>
</tr>
<tr>
<td>Dodge</td>
<td>13/13</td>
<td>100%</td>
</tr>
<tr>
<td>Fond du Lac</td>
<td>32/37</td>
<td>86%</td>
</tr>
<tr>
<td>Marquette</td>
<td>42/58</td>
<td>72%</td>
</tr>
<tr>
<td>Waushara</td>
<td>26/31</td>
<td>84%</td>
</tr>
<tr>
<td>Winnebago</td>
<td>07/13</td>
<td>54%</td>
</tr>
</tbody>
</table>

Does your county collaborate with or plan to collaborate with neighboring counties for PLSS updates on shared county borders?

Yes

Custodian
- County Surveyor

Maintenance
- As needed

Standards
- Statutory Standards for PLSS Corner Remonumentation
  s. 59.74, Wis. Stats. Perpetuation of section corners, landmarks.
  s. 60.84, Wis. Stats. Monuments.
  s. 236.15, Wis. Stats. Surveying requirements.
- Wisconsin County Surveyor’s Association survey grade standard: Coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by s. 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision.

HARN (High Accuracy Reference Network)
Layer Status
- 100% complete
Custodian
- County Surveyor
Maintenance
- As needed
Standards
- NGS Height Mod data sheets are referenced to NAD 83 (2007) ellipsoid and NAVD 88 GEOID 09 orthometric. The county uses it’s own GPS observation data based on NAD 83 (1991) HARN ellipsoid and NAVD 88 GEOID 03 orthometric.

Land Survey Document Indexing and Imaging
Status
- 100% complete
- Certified Survey Map, Certificate of Survey, and tie sheet imaging with PLSS-based indexing
Custodian
- County Surveyor
Maintenance
- As needed
Standards

- s. 59.45 Wis. Stats. County surveyor; duties, deputies, fees.

Parcel Mapping (Benchmark 3)

Parcel Geometries

Layer Status

- 100% complete (meets Benchmark 3 as related to Strategic Initiative grants)
- 100% of the county’s parcels are available in ESRI File Geodatabase or Shapefile GIS format. The parcels are exported from an ArcSDE geodatabase.
- The projection is WISCRS (Wisconsin Coordinate Reference System), the coordinate system is NAD 83 (1991) HARN, and the units are US Survey Feet
- The county parcel polygon model directly integrates tax/assessment data as parcel attributes
- The county implements basic methods of the Esri Parcel Fabric Data Model and ESRI’s Local Government Information Model

Custodian

- County GIS Specialist

Maintenance

- Updates are synced with Real Property Listing

Standards and Documentation

- The county Data Dictionary is in the form of a detailed Data Model graphic poster

Assessment/Tax Roll Data

Layer Status

- 100% complete
- The name of the software vendor the county utilizes is GCS Software, Onalaska
- The database begins with the year 2000

Custodian

- County Treasurer/RPL

Maintenance

- Dependent on number and complexity of recorded documents

Standards

- s. 73.03(2a), Wis. Stats. Department of Revenue (DOR) – Powers and duties defined.
- Department of Revenue Property Assessment Manual – Chapter 5 and DOR format standard requested by DOR for assessment/tax roll data
- s. 59.72(2)(a), Wis. Stats. Presence of all nine “Act 20” attributes
- s. 59.72(2)(a), Wis. Stats. Crosswalk of attributes

<table>
<thead>
<tr>
<th>Act 20 Attributes Required by s. 59.72(2)(a)</th>
<th>Field Name(s) in County Land Info System</th>
<th>Notes on Data or Exceptions to DOR Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessed value of land</td>
<td>LandValue</td>
<td></td>
</tr>
<tr>
<td>Assessed value of improvements</td>
<td>ImprovementValue</td>
<td></td>
</tr>
<tr>
<td>Total assessed value</td>
<td>TotalValue</td>
<td></td>
</tr>
<tr>
<td>Class of property, as specified in s. 70.32 (2)(a)</td>
<td>Class, Code, Description</td>
<td></td>
</tr>
<tr>
<td>Estimated fair market value</td>
<td>FairMarketValue</td>
<td></td>
</tr>
<tr>
<td>Total property tax</td>
<td>AmountTotal</td>
<td></td>
</tr>
<tr>
<td>Any zoning information maintained by the county</td>
<td>Zoning</td>
<td>Zoning information is not required in DOR schema</td>
</tr>
<tr>
<td>Any property address information maintained by the county</td>
<td>PreDir, Street, Type, PostDir</td>
<td></td>
</tr>
<tr>
<td>Any acreage information maintained by the county</td>
<td>AcresTAX, AcresGIS</td>
<td></td>
</tr>
</tbody>
</table>
Non-Assessment/Tax Information Tied to Parcels: Permits

Layer Status
- Completion in planning phase

Custodian
- Land Use Planning & Zoning Office

Maintenance
- NA

Standards
- Code of Green Lake County Part III Land Use Legislation

ROD Real Estate Document Indexing and Imaging Status
- Grantor/Grantee Index
  - complete back to 1990
- Tract Index
  - complete back to 1990
  - tract indexing is PLSS-based and not parcel PIN-based
  - the county’s tract indexing encompasses deed, land contract, mortgage, certified survey map, plat, etc. documents
- Imaging
  - complete back to 1935
  - indexed only by document#/volume-page between 1990 and 1935

Custodian
- Register of Deeds

Maintenance
- daily

Standards
- s. 59.43, Wis. Stats. Register of deeds; duties, fees, deputies.
- ch. 706, Wis. Stats. Conveyances of real property; Recording; Titles.

LiDAR and Other Elevation Data

LiDAR

Layer Status
- 100% complete
- Acquired LiDAR in 2009
- 3 foot post spacing

Custodian
- GIS Specialist

Maintenance
- Review needs at 10 year intervals. The 5 year ortho projects are produced using the LiDAR data. Changes in elevation over time, such as construction, highway projects, grading, and mining may affect the accuracy of the ortho.

Standards
- FEMA compliant

LiDAR Derived ESRI Terrain Dataset

Layer Status
- 100% complete
- Terrain references bare earth mass points and hydro hard breaklines in a geodatabase

Custodian
- GIS Specialist
LiDAR Derived DEM digital elevation model
Layer Status
- The terrain is converted to 2 meter (6 foot) raster DEMs as needed for the extent needed
Custodian
- GIS Specialist
Maintenance
- See LiDAR
Standards
- See LiDAR

LiDAR Derived 2 foot Contours
Layer Status
- 100% complete
Custodian
- GIS Specialist
Maintenance
- See LiDAR
Standards
- See LiDAR

LiDAR Derived Watersheds
Layer Status
- Completion in planning phase
Custodian
- GIS Specialist
Maintenance
- See LiDAR
Standards
- See LiDAR

LiDAR Derived Bridges and Culverts
Layer Status
- 100% complete
Custodian
- GIS Specialist
Maintenance
- Bridge and culvert locations are added as needed to support hydro modeling. LiDAR shows roads in high relief. When modeling water flow this creates “digital dams” that artificially impound the water. In reality there are usually bridges or culverts that allow water to flow through road berms and other barriers. To rectify this, it is necessary to create a layer of ‘culverts’ so that water can flow unimpeded.
Standards
- Software documentation for hydro analysis tools, specifically watershed delineation
Orthoimagery

Layer Status
- The county contracts for butt matched TIF uncompressed tiled images on an update cycle of 5 years
  - 1992 NAPP 1 meter b&w (National Aerial Photography Program) reprojected by Ayres, Madison, to County Coord.
  - 2000 Ayres, Madison, 12 inch b&w using 2000 DTM
  - 2005 ImageAmerica, Missouri, 6 inch b&w using 2000 DTM
  - 2011 Kucera, Ohio, 6 inch color using 2009 LiDAR
  - 2015 Kucera, Ohio, 4 inch color using 2009 LiDAR
- The county did not participate in WROC (Wisconsin Regional Ortho Consortium) 2015
- The next year of planned flight is 2020

Custodian
- GIS Specialist

Maintenance
- Update and archive is every 5 years. Accuracy during ortho production is dependent on the LiDAR data.

Standards
- Specifications determined by professional vendors

Address Points and Street Centerlines

Address Point Data
Layer Status
- 100% complete

Custodian
- GIS Specialist

Maintenance
- Updated quarterly

Standards
- Code of Green Lake County Chapt. 217 Road Names and Building Numbers

Street Centerlines with Address Ranges
Layer Status
- 100% complete

Custodian
- GIS Specialist

Maintenance
- Updated quarterly

Standards
- Code of Green Lake County Chapter 217 Road Names and Building Numbers

Land Use

Current Land Use
Layer Status
- 100% complete

Custodian
- GIS Specialist

Maintenance
- In conjunction with any comprehensive plan updates

Standards
- Code of Green Lake County Part III Land Use Legislation
Future Land Use
Layer Status
- 100% complete
Custodian
- GIS Specialist
Maintenance
- In conjunction with any comprehensive plan updates
Standards
- Code of Green Lake County Part III Land Use Legislation
- s. 66.1001, Wis. Stats. Comprehensive planning.
  Future land use maps are typically created through a community’s comprehensive planning process. Future land use mapping for a county may be a patchwork of maps from comprehensive plans adopted by municipalities and the county.

Zoning

County General Zoning
Layer Status
- 100% complete
Custodian
- GIS Specialist
Maintenance
- Land Use Planning & Zoning Office has edit privileges
Standards
- Code of Green Lake County Part III Land Use Legislation

County Special Purpose Zoning: Shoreland, Farmland Preservation, Floodplain
Layer Status
- 100% complete
Custodian
- GIS Specialist
Maintenance
- In conjunction with FPP updates and FEMA updates
Standards
- Code of Green Lake County Part III Land Use Legislation

Administrative Boundaries

Civil Division Boundaries
Layer Status
- 100% complete
Custodian
- GIS Specialist
Maintenance
- Annexations are recorded with the Register of Deeds
Standards
- Accuracy dependent on parcel mapping

School Districts
Layer Status
- 100% complete
Parcels are dissolved based on the tax roll school district attribute. They are not based on any legal written description of the school district boundaries, nor is any such description known to exist. It is unknown how the school district attribute was originally assigned on the tax roll.

School district name is the only attribute

Election Boundaries: Supervisor Districts & Wards
Layer Status
- 100% complete

Public Safety: EMS, Fire, & Law Districts
Layer Status
- 100% complete

Lake and Sanitary Districts
Layer Status
- 100% complete

Drainage Districts
Layer Status
- 100% complete
The WLIP seeks to enable land information systems that are both modernized and integrated. Integration entails the coordination of land records to ensure that land information can be shared, distributed, and used within and between government at all levels, the private sector, and citizens.

One integration requirement is listed under s. 16.967(7)(a)(1), Wis. Stats., which states that counties may apply for grants for:

The design, development, and implementation of a land information system that contains and integrates, at a minimum, property and ownership records with boundary information, including a parcel identifier referenced to the U.S. public land survey; tax and assessment information; soil surveys, if available; wetlands identified by the department of natural resources; a modern geodetic reference system; current zoning restrictions; and restrictive covenants.

This chapter describes the design of the county land information system, with focus on how data related to land features and data describing regulatory limitations affecting land, are integrated and made publicly available.

**Current Land Information System**

**County Parcel Data Workflow Diagram**

This required section features a diagram that documents the county’s parcel mapping and tax roll process. The diagram can be general and simple. Complex diagrams are welcome, but the purpose of the parcel workflow is for WLIP staff and other readers to better understand the various aspects of parcel data creation and maintenance, which greatly vary from county to county.

The workflow diagram for parcel data should depict:
- Major components of parcel data, especially those referenced by s. 59.72(2)(a), including:
  1) parcel polygons, 2) tax roll data, and 3) zoning information
- Integration of parcel polygons with other data/attributes, if applicable
- Departments/offices/staff involved with the creation and maintenance of parcel data

See diagram below.
Register of Deeds
- Records real estate docs including Certified Survey Maps
- Sends real estate transfer returns to the State
- Codes docs
- Creates grantor/grantee and tract indices
- Fidlar software

Municipalities/
Local Assessors
- Update property values

State
- DOR – Equalized assessment values, Property tax credits
- DNR – Managed Forest Lands Values

Real Property Listers
- Creates new parcels
- Maintains unique parcel ID
- Ownership changes
- GCS Certified Survey Maps
- Finalizes Tax Roll
- Address Administrator
- GCS Software

Surveyor
- PLSS Public Land Survey System
- HARN High Accuracy Reference Network
- Images and Indexes Certified Survey Maps, Certificates of Survey, and tie sheets

Zoning Administrator
- General zoning
- Shoreland zoning
- Farmland Preservation
- Floodplain zoning
- Current land use
- Future land use
- Permit activity

GIS Specialist
- Maintains parcel geometries
- ESRI Software

Land Information Officer
- Submits parcel polygons + tax roll data + zoning information to DOA

Treasurer
- Tax deeds
- Prints and mails property owner tax bills
- GCS Software

Sheriff Communications
- Address Ordinance

DOA
- Assembles Statewide Parcel Layer from Data

Tax Bills

Green Lake County
Parcel + Tax Roll + Zoning Workflow
Technology Architecture and Database Design
This section refers to the hardware, software, and systems that the county uses to develop and operate computer systems and communication networks for the transmission of land information data.

Metadata and Data Dictionary Practices
The county Data Dictionary is in the form of a detailed Data Model graphic poster created and maintained in Microsoft Visio software. The software used to develop and provide access to individual data layer geospatial metadata is ESRI’s ArcCatalog. The software generates metadata consistent with the FGDC Content Standard for Digital Geospatial Metadata.

Municipal Data Integration Process
The county GIS maintains parcel, address point, street centerline, and other base mapping for the municipalities. This mapping is generally distributed to the municipalities, rather than the county obtaining data from the municipalities.

Public Access and Website Information

<table>
<thead>
<tr>
<th>Type of Website</th>
<th>Software or App</th>
<th>3rd Party or Contractor</th>
<th>URL</th>
<th>Update Frequency/Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS webmapping site</td>
<td>ArcGIS Viewer for Flex</td>
<td>ESRI ArcGIS Server</td>
<td><a href="http://gis.co.green-lake.wi.us/">http://gis.co.green-lake.wi.us/</a></td>
<td>Quarterly</td>
</tr>
<tr>
<td>ROD land records search</td>
<td>Tapestry and Laredo (Integrated with GIS site – consideration only)</td>
<td>Fidlar</td>
<td><a href="http://www.co.green-lake.wi.us/departments.html?Department=18&amp;page=7">http://www.co.green-lake.wi.us/departments.html?Department=18&amp;page=7</a></td>
<td>Daily</td>
</tr>
<tr>
<td>RPL or tax parcel site</td>
<td>Integrated with GIS site</td>
<td>GCS Software-Customer Views</td>
<td></td>
<td>Real Time</td>
</tr>
<tr>
<td>Zoning information</td>
<td>Integrated with GIS site</td>
<td>County Land Use Planning and Zoning Dept.</td>
<td></td>
<td>Real Time</td>
</tr>
<tr>
<td>CSM certified survey maps, COS certificates of survey, PLSS &amp; HARN tie sheets</td>
<td>ASP.NET Dynamic Data</td>
<td>County Surveyor</td>
<td><a href="http://gis.co.green-lake.wi.us/gisweb/GIS_Viewer/asp/SurveySearch.htm">http://gis.co.green-lake.wi.us/gisweb/GIS_Viewer/asp/SurveySearch.htm</a></td>
<td>Quarterly</td>
</tr>
</tbody>
</table>

Data Sharing
Data Availability to Public
Green Lake County will provide a no-fee means of accessing land information through its internet “GIS Viewer”. Public terminals for land information access are available in the Government Center. Public internet access is also available at most public libraries. Data in its original format is available on media with a fee to the requester for the actual cost to reproduce the data.

Data Sharing Restrictions
Green Lake County imposes no restrictions on the use or distribution of public land information.

Government-to-Government Data Sharing
Parcel, address, road, five year ortho updates, and LiDAR are available to municipalities within the county upon request.

Training and Education
All county web applications display county contact phone numbers and emails for individual help using county public access web sites or interpreting the data on the websites.
This chapter lists the current and future land information projects the county is currently undertaking or intends to pursue over its planning horizon. A project is defined as a temporary effort that is carefully planned to achieve a particular outcome. Projects can be thought of as the means to achieving the county’s mission for its land information system.

For each project, identify:

- Project Description/Goal
- Business Drivers
- Objectives/Measure of Success
- Project Timeframes
- Responsible Parties
- Estimated Budget Information

Note that projects may focus on one single Foundational Element, or they may touch upon several Foundational Elements. Plans can be amended in the future should other significant projects arise.

**Project #1: Digital Parcel Mapping**

**Project Description/Goal**
The GIS Specialist will integrate PLSS data into the existing parcel map. This will improve the accuracy of parcel boundary lines. City and Village block corner surveys will be contracted to meet the accuracy requirements of individual municipalities. Block corner surveys will also be integrated into the existing parcel map.

Impacts Foundational Elements: Parcel Mapping.

**Business Drivers**

- The public expects accurate boundary lines to display on the county map website
- Not only land owners, but realtors, assessors, appraisers, title companies, banks, and other public and private agencies make use of accurate parcel boundaries
- Parts of the county would benefit from assessor’s plats
- City & Village parcel mapping would benefit from block corner surveys
- Large areas of WisDNR marsh are currently mapped at a lower accuracy
- It would be ideal to have all areas of the county mapped to the same level of accuracy
- Not all road right-of-ways are mapped yet

**Objectives/Measure of Success & Project Timeframes**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Duration</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>75% of PLSS integrated into parcel mapping</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2016</td>
</tr>
<tr>
<td>80% of PLSS integrated into parcel mapping</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2017</td>
</tr>
<tr>
<td>85% of PLSS integrated into parcel mapping</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2018</td>
</tr>
</tbody>
</table>

**Responsible Parties**
GIS Specialist (100%)
Contractor (100%)

**Estimated Budget Information**
See table below.
Project Description/Goal

Planned approach
- Perpetuating the county’s PLSS through reestablishing and remonumenting PLSS corners, and establishing survey-grade coordinates for PLSS corners will be work that is contracted out. Center of section is the lowest priority. Integrating corners into the parcel fabric will be done in-house by the GIS Specialist under Project #1.

Current status
- Current status of PLSS data in the county may be seen under the PLSS Foundational Element section. Any corners not survey-grade are considered approximate. Approximate corners may be taken from WisDNR 1:24K Landnet with accuracies of 40ft. Corners are only designated into two classes, so the sub-meter are included in the approximate class.

Accuracy classes include survey-grade, sub-meter, and approximate.
- **Survey-grade** – Coordinates collected under the direction of a professional land surveyor, in a coordinate system allowed by s. 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision
- **Sub-meter** – Accuracies of 1 meter or better
- **Approximate** – Accuracies of within 5 meters or to coordinates derived from public records and other relevant information

Goals
- Goals for the grant project period, including the number of corners to be reestablished and remonumented and/or the number to have new coordinates established, and the accuracy class for these new coordinates, may be seen in the milestone table below and under the PLSS Foundational Element section. Integrating corners into the parcel fabric will be done in-house by the GIS Specialist under Project #1.

Missing corner notes
- Some corners, including those which fall within large tracts of WisDNR marsh areas, may be inundated or in other areas where setting a monument at the PLSS corner location is not practical. Those corners will be further assessed during field work. Survey-grade coordinates will be assigned to those locations but possibly not monumented.

County boundary collaboration
- Efforts will be made to collaborate with neighboring counties as is the practice with current projects.

Impacts Foundational Elements: PLSS, Parcel Mapping.

Business Drivers
- A project for PLSS is a requirement for Strategic Initiative grant eligibility.
- Land surveyors tie all boundary surveys to PLSS corners
- Saves surveyors and thus land owners time and money when surveying property
- Improves the accuracy of parcel mapping
- Enables preserving valuable historic data that would otherwise be lost
- Helps preserve the value of land
- Helps reduce boundary disputes and associated costs

Objectives/Measure of Success & Project Timeframes
The objective is to meet Benchmark 4 (Completion and Integration of PLSS) by 2020. Preliminary work may be necessary to efficiently implement the new 2016 strategic initiative grant.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Duration</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>75% of PLSS remonumented</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2016</td>
</tr>
<tr>
<td>80% of PLSS remonumented</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2017</td>
</tr>
<tr>
<td>85% of PLSS remonumented</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2018</td>
</tr>
</tbody>
</table>
**Responsible Parties**
Contractor (100%)

**Estimated Budget Information**
See table below.

---

**Project #3: Other Parcel Work (Benchmarks 1 & 2)**

**Project Description/Goal**

a. Continue back-archiving/digitizing of Register of Deeds’ documents. Documents are currently scanned and indexed back to 1990. The first goal is to get back to 1986 to support 30 year title searches. Limiting indexing may be justified prior to 1975. The first documents begin around 1850.

b. The in-house GIS Specialist will write queries against the tax roll database and zoning layer attributes to meet the searchable format for Benchmark 1 of the Strategic Initiative Grant

c. The in-house GIS Specialist will write queries against the tax roll database to meet the searchable format for Benchmark 2 of the Strategic Initiative Grant

**Impacts Foundational Elements:** Parcel Mapping.

**Business Drivers**

- A project to achieve Searchable Format for Benchmarks 1 & 2 is a requirement for Strategic Initiative grant eligibility.
- Saves time and money for anyone needing access to real estate documents to be able to get that access online. Reduces the need for trips to the courthouse, and frees up time of county employees for other projects.
- Tax roll data in a standard format benefits all.

**Objectives/Measure of Success & Project Timeframes**

The objective is to meet the searchable format for Benchmarks 1 & 2 (Parcel and Zoning Data Submission, Extended Parcel Attribute Set Submission) by Mar. 31, 2016.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Duration</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back-scanned to 1987</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2018</td>
</tr>
</tbody>
</table>

---

**Responsible Parties**
Contractor (100%)
GIS Specialist (100%)

**Estimated Budget Information**
See table below.

---

**Project #4: LiDAR**

**Project Description/Goal**
Collect new LiDAR every 10 years. New LiDAR will be used for 5 year orthoimagery updates.

**Impacts Foundational Elements:** LiDAR, Orthoimagery.
Business Drivers
- Stormwater and floodplain applications
- FEMA compliant mapping
- EVAAL (Erosion Vulnerability Assessment for Agricultural Lands)
- NRCS Hydro Tools (Watershed Delineation)
- Accurate LiDAR is needed for 5 year ortho updates
- Regular data collection needed for temporal analysis such as change detection of land and land features
- Used in Ortho production

Objectives/Measure of Success & Project Timeframes

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Duration</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect spring LiDAR and process through the summer. QC and finalize by the fall.</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2025</td>
</tr>
</tbody>
</table>

Responsible Parties
Contractor (100%)

Estimated Budget Information
See table below.

Project #5: Orthoimagery

Project Description/Goal
Collect new orthoimagery every 5 years.

Impacts Foundational Elements: Orthoimagery, LiDAR.

Business Drivers
- High resolution aerial imagery is used in planning, conservation, real estate activities, recreation, emergency management, and navigation
- Older images are archived as a historical record
- Regular data collection needed for temporal analysis such as change detection of land and land features
- Used to verify changes in LiDAR

Objectives/Measure of Success & Project Timeframes

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Duration</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect spring orthos and process through the summer. QC and finalize by the fall.</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2020</td>
</tr>
</tbody>
</table>

Responsible Parties
Contractor (100%)

Estimated Budget Information
See table below.

Project #6: Address Points and Street Centerlines
**Project Description/Goal**
Run annual validation queries between the GIS address database, the RPL’s database, and Sheriff’s Communication database (MSAG) to ensure they match. Ideally, they will also match the USPS database.

Impacts Foundational Elements: Address Points and Street Centerlines.

**Business Drivers**
- Emergency management, deliveries, GPS navigation, and computerized routing all rely on accurate address data

**Objectives/Measure of Success & Project Timeframes**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Duration</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Validate query results</td>
<td>First quarter</td>
<td>Jan. 1 - Mar. 31, 2016</td>
</tr>
<tr>
<td>Validate query results</td>
<td>First quarter</td>
<td>Jan. 1 - Mar. 31, 2017</td>
</tr>
<tr>
<td>Validate query results</td>
<td>First quarter</td>
<td>Jan. 1 - Mar. 31, 2018</td>
</tr>
</tbody>
</table>

**Responsible Parties**
GIS Specialist (100%)

**Estimated Budget Information**
See table below.

---

**Project #7: Software/Hardware/Website**

**Project Description/Goal**
Annual software maintenance currently in the Information Technology budget is listed here for future consideration. Purchase a new GIS Server every 5 years. In-house work to develop and maintain website on existing server and replacement servers over time.

Impacts Foundational Elements: Not associated with a specific element.

**Business Drivers**
- Integrates ROD, GIS, RPL, and Survey data access in a highly utilized public website
- Avoids an interruption in land information data flow to the website and other applications
- It is more efficient after a period of time to build a new server, rather than attempt to upgrade individual server components
- The old server is repurposed

**Objectives/Measure of Success & Project Timeframes**

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Duration</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase new GIS Server</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2020</td>
</tr>
<tr>
<td>Website maintenance</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2016</td>
</tr>
<tr>
<td>Website maintenance</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2017</td>
</tr>
<tr>
<td>Website maintenance</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2018</td>
</tr>
</tbody>
</table>

**Responsible Parties**
Vendor (100%)
GIS Specialist (100%)

**Estimated Budget Information**
See table below.
Project #8: Training and Education

Project Description/Goal
Continue education of Land Information Council members in program and technology changes. Professional development opportunities include conference presentations and workshops such as but not limited to:

- WLIA (Wisconsin Land Information Association)
- EWUG (ESRI Wisconsin User Group)
- WCSA (Wisconsin County Surveyors Association)
- WSLS (Wisconsin Society of Land Surveyors)
- WCTA (Wisconsin County Treasurers Association)
- WRPLA (Wisconsin Real Property Listers Association)
- WRDA (Wisconsin Register of Deeds Association)

Impacts Foundational Elements: Not associated with a specific element.

Business Drivers
- Continually changing technology
- Continually changing administrative programs

Objectives/Measure of Success & Project Timeframes

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Duration</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>activity report</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2017</td>
</tr>
<tr>
<td>activity report</td>
<td>1 year</td>
<td>Jan. 1 - Dec. 31, 2018</td>
</tr>
</tbody>
</table>

Responsible Parties
Educators (50%), LIC members (50%)

Estimated Budget Information
See table below.
**Project Estimated Budget Information (per annum for the next 3 years)**

<table>
<thead>
<tr>
<th>Project</th>
<th>Item</th>
<th>Unit Cost</th>
<th>Cost</th>
<th>Total Project Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Digital Parcel Mapping</td>
<td>a. In-house GIS Specialist position integrate PLSS into parcel map (Strategic Initiative Grant)</td>
<td>6% of 88,000</td>
<td>5,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>b. In-house GIS Specialist position parcel map maintenance (Retained Fees)</td>
<td>17% of 88,000</td>
<td>15,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>c. Contracted City and Village block corner surveys (Base Budget Grant)</td>
<td>$130 per corner</td>
<td>10,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30,000</td>
</tr>
<tr>
<td>2. PLSS Remonumentation</td>
<td>a. Contracted PLSS (Strategic Initiative Grant)</td>
<td>$1,240 per corner</td>
<td>40,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>b. Contracted PLSS (Base Budget Grant)</td>
<td>$1,240 per corner</td>
<td>55,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>95,000</td>
</tr>
<tr>
<td>3. Other Parcel Work</td>
<td>a. Contracted ROD archiving/digitizing (Base Budget Grant)</td>
<td>10,000</td>
<td>10,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>b. In-house GIS Specialist position format tax roll and zoning data (Strategic Initiative Grant)</td>
<td>3% of 88,000</td>
<td>2,500</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>c. In-house GIS Specialist position format extended tax roll (Strategic Initiative Grant)</td>
<td>3% of 88,000</td>
<td>2,500</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15,000</td>
</tr>
<tr>
<td>4. LiDAR</td>
<td>a. Contracted LiDAR (2025)</td>
<td>349 mi² * $287 /mi² = $100,000</td>
<td>0</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>5. Orthoimagery</td>
<td>a. Contracted Orthoimagery (2020 Base Budget Grant)</td>
<td>380 mi² * $132 /mi² = $50,000</td>
<td>35,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>b. Contracted Orthoimagery (2020 designated non-metallic mining fees)</td>
<td></td>
<td>15,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>6. Address Points and Street Centerlines</td>
<td>a. In-house GIS Specialist position address maintenance (Retained Fees)</td>
<td>6% of 88,000</td>
<td>5,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5,000</td>
</tr>
<tr>
<td>7. Software/Hardware/Website</td>
<td>a. annual software maintenance</td>
<td></td>
<td>0</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>1. Register of Deeds Fidlar $11,840</td>
<td></td>
<td>11,840</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2. Treasurer GCS $10,760</td>
<td></td>
<td>10,760</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3. GIS Esri $5,500</td>
<td></td>
<td>5,500</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>4. Land Cons./Surveyor/GIS/Hwy AutoCAD $4,000</td>
<td></td>
<td>4,000</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>b. Contracted GIS server hardware purchase (2020)</td>
<td></td>
<td>5,000</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>c. In-house GIS Specialist position website development and maintenance (Retained Fees)</td>
<td>6% of 88,000</td>
<td>5,000</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5,000</td>
</tr>
<tr>
<td>8. Training and Education</td>
<td>a. Annual conference attendance</td>
<td></td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>GRAND TOTAL</strong></td>
</tr>
</tbody>
</table>

Note. These estimates are provided for planning purposes only. Budget is subject to change.

**note 1** The estimate shown is based on an independent contract outside the Wisconsin Regional Orthophotography Consortium (WROC). For comparison, WROC 2015 per square mile cost estimates were $225 for 6 inch resolution and $850 for 3 inch. Ortho is calculated at 380 square miles of land & water total, LiDAR at 349 square miles of land, not including 31 square miles of water. Values are according to the US Census. Ortho and LiDAR projects include a small buffer around the county, which does not need to be included.

**note 2** Land Conservation participates in the USDA (US Department of Agriculture) ESRI software enterprise license at no cost.