Green Lake County
Land Information Plan
2022-2023-2024

Land Information Council
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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 Officer (LIO) and the Green Lake County Land Information Council. Under state statute 59.72(3)(b), a "**countywide plan for land records modernization**" is required for participation in the Wisconsin Land Information Program (WLIP). The purpose of this document is twofold: 1) to meet WLIP funding eligibility requirements necessary for receiving grants and retaining fees for land information, and 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.

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 2020, Green Lake County was awarded $111,248 in WLIP grants and retained a total of $41,648 in local register of deeds document recording fees for land information.

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 rights attributable to landowners.

Mission of the Land Information Office. In the next three years, Green Lake County's Land Information Office strives to be recognized for its exceptional web mapping site, gains in governmental efficiencies by broadening the utilization of GIS, improvements in parcel mapping accuracy, and responsiveness to meeting the land records needs of residents and businesses.

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

Green Lake County Land Information Projects: 2022-2023-2024	
Project	**Project Plan for PLSS (Benchmark 4)**
Project #1	**Oblique Imagery Update**
Project #2	**Import Surveys into Imaging**
Project #3	**Move GIS to the Cloud**
Project #4	**Scan Zoning Records**
Project #5	**Scan Old Parcel Books and Tax Rolls**
Project #6	**Land Records Hosting**
Project #7	**NG911 Updates**
Project #8	**Education and Public Outreach**
Project #9	**Multi-function large format printer/scanner**
Project #10	**GPS Hardware**

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 map data layers known as Foundational Elements.

1 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
- Coordinate the sharing of parcel/tax roll data with the Department of Administration in a searchable format determined by DOA under s. 59.72(2)(a)

LAND INFORMATION

Any physical, legal, economic or environmental information or characteristics concerning land, water, groundwater, subsurface resources or air in this state.

'Land information' includes information relating to topography, soil, soil erosion, geology, minerals, vegetation, land cover, wildlife, associated natural resources, land ownership, land use, land use controls and restrictions, jurisdictional boundaries, tax assessment, land value, land survey records and references, geodetic control networks, aerial photographs, maps, planimetric data, remote sensing data, historic and prehistoric sites and economic projections.

– Wis. Stats. section 59.72(1)(a)

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 made funding available to counties in the form of Strategic Initiative grants to be prioritized for the purposes of parcel/tax roll dataset improvement.

For Strategic Initiative grant eligibility, counties are 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—were determined through a participatory planning process. Current benchmarks are detailed in the WLIP grant application, as will be future benchmarks.

WLIP Benchmarks (For 2016-2021 Grant Years)

- Benchmark 1 & 2 – Parcel and Zoning Data Submission/Extended Parcel Attribute Set Submission
- Benchmark 3 – Completion of County Parcel Fabric
- Benchmark 4 – Completion and Integration of PLSS

More information on how Green Lake County is meeting these benchmarks appears in the Foundational Elements section of this plan document.

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.

County Land Information Plan Process

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. The 2022-2023-2024 plan, completed at the end of 2021, is the third post-Act 20 required update.

Plan dates:

1992-1993-1994-1995-1996-1997	Res. 21-1992
1998-1999-2000-2001-2002-2003-2004	Res. 06-1999
2005-2006-2007-2008-2009-2010	Res. 16-2006
2011-2012-2013-2014-2015	
2016-2017-2018	
2019-2020-2021	
2022-2023-2024	

County Land Information Plan Timeline

- DOA release of finalized instructions by March 31, 2021.
- April–September 2021: Counties work on land info plans.
- Draft plans due to DOA by September 30, 2021 (but sooner is advised).
- Final plans with county land info council approval due by December 31st, 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 DOA requires county Land Information Councils to approve final plans.

This plan was prepared by the county LIO and the Green Lake County Land Information Council as listed below.

Green Lake County Land Information Council			
Name	**Title**	**Email**	**Phone**
Harley Reabe, Chair	County Board Chair	hreabe@co.green-lake.wi.us	920-294-4031
Renee Thiem-Korth, Vice-Chair	Register of Deeds	rthiemkorth@co.green-lake.wi.us	920-294-4024
Liz Otto, Secretary	County Clerk	lotto@co.green-lake.wi.us	920-294-4010
Paul Gunderson	County Conservationist	pgunderson@co.green-lake.wi.us	920-294-4055
Matt Kirkman	Land Use Planning & Zoning Director	mkirkman@co.green-lake.wi.us	920-294-4175
Don Lenz	County Surveyor	dlenz@co.green-lake.wi.us	920-294-4026
Mark Podoll	Sheriff	mpodoll@co.green-lake.wi.us	920-294-4134
Bob Schneider	Realtor		
Gerald Stanuch	GIS Specialist Land Information Officer	gstanuch@co.green-lake.wi.us	920-294-4174
Amanda Toney	Treasurer/Real Property Lister	atoney@co.green-lake.wi.us	920-294-4019

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 to conduct most mapping and geospatial analysis.

FOUNDATIONAL ELEMENTS

PLSS
Parcel Mapping
LiDAR and Other Elevation Data
Orthoimagery
Address Points and Street Centerlines
Land Use
Zoning
Administrative Boundaries
Other Layers

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, this plan places 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

PLSS Layer Status	
	Status/Comments
Number of PLSS corners (section, ¼, meander) **set in original government survey** that can be remonumented in your county	• 1857
Number of PLSS corners capable of being remonumented in your county that **have been remonumented**	• 1598
Number of remonumented PLSS corners with survey grade coordinates (see below for definition) • **SURVEY GRADE** – coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision • **SUB-METER** – point precision of 1 meter or better • **APPROXIMATE** – point precision within 5 meters or coordinates derived from public records or other relevant information	• 1598
Number of survey grade PLSS corners integrated into county digital parcel layer	• 1598
Number of non-survey grade PLSS corners integrated into county digital parcel layer	• 259
Tie sheets available online?	• Yes (https://maps.sco.wisc.edu/surveycontrolfinder/)
Percentage of remonumented PLSS corners that have **tie sheets available online** (whether or not they have corresponding coordinate values)	• 100%
Percentage of remonumented PLSS corners that have tie sheets available online (whether or not they have corresponding coordinate values) **and a corresponding URL path/hyperlink value** in the PLSS geodatabase	• 100%
PLSS corners believed to be remonumented based on filed tie-sheets or surveys, but do not have coordinate values	• 0
Approximate number of PLSS corners believed to be lost or obliterated	• 259
Which system(s) for **corner point identification/ numbering** does the county employ (e.g., the Romportl point numbering system known as Wisconsin Corner Point Identification System, the BLM Point ID Standard, or other corner point ID system)?	• Sequential page number of tie sheet as filed (0001-1858)
Does the county contain any **non-PLSS areas** (e.g., river frontage long lots, French land claims, private claims, farm lots, French long lots, etc.) or any special situations regarding PLSS data for tribal lands?	• No
Total number of PLSS corners along each bordering county	• 191
Number of PLSS corners remonumented along each county boundary	• 186
Number of remonumented PLSS corners along each county boundary with survey grade coordinates	• 186
In what ways does your county collaborate with or plan to collaborate with neighboring counties for PLSS updates on shared county borders?	• Case-by-case basis between County Surveyors and Highway Depts.

Custodian

- County Surveyor

Maintenance

- Field check any corners with a last visited date over 20 years

Standards

- Statutory Standards for PLSS Corner Remonumentation
  - s. 59.74, Wis. Stats. Perpetuation of section corners, landmarks.
  - s. 60.84, Wis. Stats. Monuments.

        - ch. A-E 7.08, Wis. Admin. Code, U.S. public land survey monument record.
        - ch. A-E 7.06, Wis. Admin. Code, Measurements.
        - s. 236.15, Wis. Stats. Surveying requirement.
    - SURVEY GRADE standard from Wisconsin County Surveyor's Association:
        - **SURVEY GRADE** – coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision
        - **SUB-METER** – point precision of 1 meter or better
        - **APPROXIMATE** – point precision within 5 meters or coordinates derived from public records or other relevant information

Other Geodetic Control and Control Networks

e.g., HARN, Height Mod., etc.

Layer Status

- NA

Parcel Mapping

Parcel Geometries

Layer Status

- **Progress toward completion/maintenance phase:** In Green Lake County, 100% of the county's parcels are available in a commonly-used digital GIS format.
- **Projection and coordinate system:** WISCRS (Wisconsin Coordinate Reference System)
- **Integration of tax data with parcel polygons:** The county does have a parcel polygon model that directly integrates tax/assessment data as parcel attributes.
- **Online Parcel Viewer Software/App and Vendor name:** ESRI Web AppBuilder (In-house)
- **Unique URL path for each parcel record:** Yes
  https://gis.co.green-lake.wi.us/gisweb/GIS_Viewer/index.html?find=999999999999
  https://ascent.co.green-lake.wi.us/LandRecords/PropertyListing/RealEstateTaxParcel/DetailFromParcelNumber?parcelNumber=999999999999

Custodian

- County GIS Specialist

Maintenance

- **Update Frequency/Cycle**: Parcel polygons are updated throughout the year to coincide with property listing

Standards

- **Data Dictionary**: The county Data Dictionary is in the form of a detailed Data Model graphic poster created in Microsoft Visio and exported to PDF

Assessment/Tax Roll Data

Layer Status

- **Progress toward completion/maintenance phase:** NA
- **Tax Roll Software/App and Vendor name:** Ascent Land Records Suite by Transcendent Technologies
- **Municipal Notes:** NA

Custodian

- County Treasurer/RPL (Real Property Lister)

Maintenance

- **Maintenance of the Searchable Format standard:** To maintain the Searchable Format standard, the county will rely on a database view maintained by our tax software vendor.

- **Searchable Format Workflow:** The county maintains parcel/tax roll data in the Searchable Format or close enough to the Searchable Format that **little to no human labor is required** for the annual submission of parcel/tax roll data to DOA.

Standards

- Wisconsin Department of Revenue Property Assessment Manual and attendant DOR standards
- DOR XML format standard requested by DOR for assessment/tax roll data

Non-Assessment/Tax Information Tied to Parcels

e.g., Permits, Easements, Non-Metallic Mining, Brownfields, Restrictive Covenants

Layer Status

- NA

ROD Real Estate Document Indexing and Imaging

Layer Status

- **Grantor/Grantee Index:** complete back to 1982
- **Tract Index:**
  - complete back to 1982, earlier hardcopy index is online as a digital document
  - 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 1982 and 1935
- **ROD Software/App and Vendor Name:** Laredo/Tapestry by Fidlar

Custodian

- County 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

- **Most recent acquisition year:** 2018
- **Accuracy:** vertical 19.6 cm at 95% confidence level
- **Post spacing:** 0.7 meters (density 2 points per square meter)
- **Contractor's standard, etc.:** supports 1-ft contour interval
- **Next planned acquisition year:** 2026 (8-year period)
- **QL1/QL2 acquisition plans:** 2018 is 3DEP QL2 (USGS 3D Elevation Program Quality Level 2)

Custodian

- GIS Specialist

Maintenance

- 3DEP program 8-year period. 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

- 3DEP program

LiDAR Derivatives

e.g., Bare-Earth Digital Terrain Model (DTM), Bare-Earth Elevation Contours, Bare-Earth Digital Elevation Model (DEM), Digital Surface Model (DSM), Hydro-Enforced DEMs, etc.

Layer Status

- 2 ft DEM

Custodian

- GIS Specialist

Maintenance

- See LiDAR

Standards

- See LiDAR

Other Types of Elevation Data

Layer Status

- In-progress

Custodian

- GIS Specialist

Maintenance

- Interim area of interest updates between the countywide 8 year LiDAR updates will be done via drone camera imagery processed into elevation models
- Affordable, site specific, high resolution, temporal data acquisition

Standards

- FAA (Federal Aviation Administration) Part 107 Small Unmanned Aircraft Rule
- Lexipol Policy-613 UAS (Unmanned Aerial Systems)

Orthoimagery

Orthoimagery

Layer Status

- **Most recent acquisition year:** 2020
- **Resolution:** 6"
- **Contractor's standard:** TIF
- **Next planned acquisition year:** 2025

Custodian

- GIS Specialist

Maintenance

- Update every 5 years

Standards

- Contractor

Historic Orthoimagery

Layer Status

- 1992, 2000, 2005, 2011, 2015

Custodian

- GIS Specialist

Maintenance

- Archive

Standards

- Contractor

Other Types of Imagery

e.g., Oblique Imagery, Satellite Imagery, Infra-red, etc.

Layer Status

- In-progress

Custodian

- GIS Specialist

Maintenance

- Interim area of interest updates between the countywide 5 year ortho updates will be done via street level imagery with 360 camera hardware, and ortho imagery with drone camera hardware
- Affordable, site specific, high resolution, temporal data acquisition

Standards

- FAA (Federal Aviation Administration) Part 107 Small Unmanned Aircraft Rule
- Lexipol Policy-613 UAS (Unmanned Aerial Systems)

Address Points and Street Centerlines

Address Point Data

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Wisconsin GIS NG9-1-1 Data Standard (Site/Structure Address Point) 2020
- WLIA Address Point Data Standard 2020
- Code of Green Lake County Chapter 217 Road Names and Building Numbers

Building Footprints

Layer Status

- NA

Other Types of Address Information

e.g., Address Ranges

Layer Status

- NA

Street Centerlines

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Wisconsin GIS NG9-1-1 Data Standard (Road Centerline) 2020

- WLIA Street Centerline Data Standard 2020
- Code of Green Lake County Chapter 217 Road Names and Building Numbers

Rights of Way

Layer Status

- In-progress
- **How maintained:** Attribute of parcel lines

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- DOT

Trails

e.g., Recreational Trails, Snowmobile Trails

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- DNR

Land Use

Current Land Use

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- In sync with Comp plan

Standards

- Code of Green Lake County Part III Land Use Legislation

Future Land Use

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- In sync with Comp plan

Standards

- s. 66.1001, Wis. Stats. Comprehensive planning.

Zoning

County General Zoning

Layer Status

- The County does maintain a GIS representation of county general zoning boundaries.

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Code of Green Lake County Part III Land Use Legislation

Shoreland Zoning

Layer Status

- The County does maintain a GIS representation of county shoreland zoning boundaries.

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Code of Green Lake County Part III Land Use Legislation

Farmland Preservation Zoning

Layer Status

- The County does maintain a GIS representation of county farmland preservation zoning boundaries.
- Year of certification: Oct. 11, 2017 (updated to reflect re-zones since certification)

Custodian

- GIS Specialist

Maintenance

- Updated to reflect re-zones since certification

Standards

- Code of Green Lake County Part III Land Use Legislation

Floodplain Zoning

Layer Status

- The County does maintain a GIS representation of floodplain zoning boundaries.
- The county's floodplain zoning GIS data is the same as/identical to the FEMA map.

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Code of Green Lake County Part III Land Use Legislation

Airport Protection

Layer Status

- Not administered by county.

Municipal Zoning Information Maintained by the County

e.g., Town, City and Village, Shoreland, Floodplain, Airport Protection, Extra-Territorial, Temporary Zoning for Annexed Territory, and/or Zoning Pursuant to a Cooperative Plan

Layer Status

- Extra-Territorial boundary lines

Custodian

- GIS Specialist

Maintenance

- On going

Standards

- Municipal

Administrative Boundaries

Civil Division Boundaries

e.g., Towns, City, Villages, etc.

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Survey Grade PLSS

School Districts

Layer Status

- 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

Custodian

- GIS Specialist

Maintenance

- School district boundaries have never changed since modern assessment records

Standards

- Accuracy dependent on parcel mapping

Election Boundaries

e.g., Voting Districts, Precincts, Wards, Polling Places, etc.

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Updated with Census

Standards

- Accuracy dependent on parcel mapping

Utility Districts

e.g., Water, Sanitary, Electric, etc.

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Transmission networks only - distribution networks maintained by utilities

Emergency Service Boundary – Law/Fire/EMS

Layer Status

- **Law Enforcement:** Complete
- **Fire:** Complete
- **EMS:** Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Wisconsin GIS NG9-1-1 Data Standard (Emergency Service Boundary)
- Based on outside service agreements

Public Safety Answering Points (PSAP) Boundary

Layer Status

- Complete
- **PSAP Boundary:** PSAP boundary is the same as/coincident with the county boundary

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Wisconsin GIS NG9-1-1 Data Standard (PSAP Boundary)
- Based on outside service agreements

Provisioning Boundary

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Wisconsin GIS NG9-1-1 Data Standard (Provisioning Boundary)
- Based on outside service agreements

Other Public Safety

e.g., Healthcare Facilities

Layer Status

- NA

Lake Districts

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Changes are recorded with the Register of Deeds

Standards

- Based on recorded legal descriptions

Native American Lands

Layer Status

- NA

Other Administrative Districts

e.g., County Forest Land, Parks/Open Space, etc.

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Accuracy dependent on parcel mapping

Other Layers

Hydrography Maintained by County or Value-Added

e.g., Hydrography maintained separately from DNR or value-added, such as adjusted to orthos; Elevation-Derived Hydrography

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Based on LiDAR hydro breaklines

Cell Phone Towers

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- Based on FCC ASR (Antenna Structure Registration)

Bridges and Culverts

Layer Status

- Complete

Custodian

- GIS Specialist

Maintenance

- Ongoing

Standards

- DOT bridges plus local data

3 LAND INFORMATION SYSTEM

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.

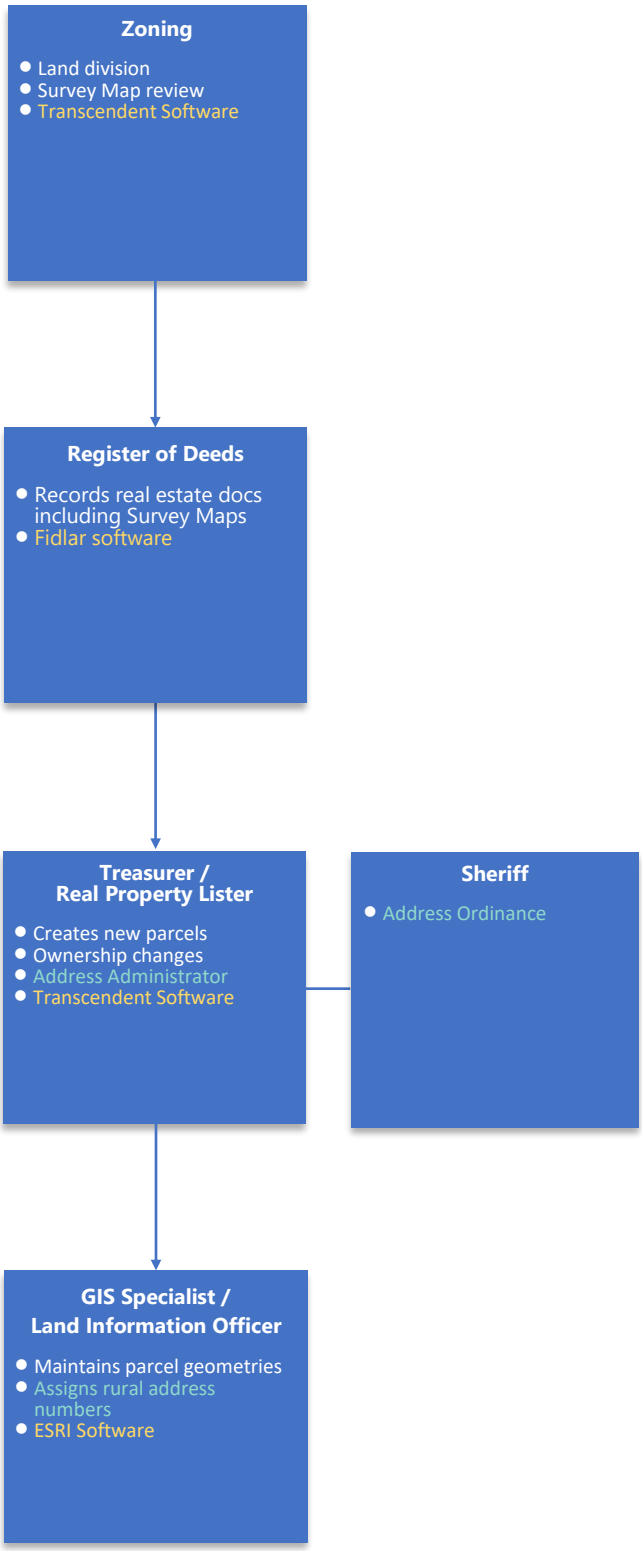
One integration requirement is listed under s. 16.967(7)(a)(1), Wis. Stats., which states that counties may apply for grants for:

- 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 land rights are integrated and made publicly available.

Current Land Information System

County Parcel Data Workflow Diagram



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.

Hardware

- Two cloud servers – GIS, Register of Deeds
- One local server – Treasurer
- Large format printer
- AR Sandbox (computer and monitor) for public outreach and education
- Mobile mapping devices, cameras, and GPS
- **County currently uses ArcGIS Pro:** Yes, county has an ArcGIS Pro license
- **County plans to upgrade to ArcGIS Pro:** No, county uses ArcMap in production

Software

- ESRI ArcGIS

Website Development/Hosting

- In-house GIS mapping website
- Contracted Register of Deeds' document access – Tapestry & Laredo
- Contracted Treasurer's web portal – Transcendent Ascent Land Records Suite
- Contracted Zoning web portal – Transcendent Ascent Permit Management Suite

Metadata and Data Dictionary Practices

Metadata Creation

- **Metadata creation and maintenance process:** The county Data Dictionary is in the form of a detailed Data Model graphic poster created and maintained in Microsoft Visio software

Metadata Software

- **Metadata software:** ESRI ArcGIS
  - The software does generate metadata consistent with the FGDC Content Standard for Digital Geospatial Metadata, and ISO geographic metadata standard 19115.
- **Metadata fields manually populated:** NA

Metadata Policy

- **Metadata Policy:** FGDC Standard

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

Public Access and Website Information (URLs)

Public Access and Website Information			
GIS Webmapping Application(s) Link - URL	**GIS Download Link – URL**	**Real Property Lister Link - URL**	**Register of Deeds Link - URL**
https://gis.co.green-lake.wi.us/gisweb/GIS_Viewer/	https://gis.co.green-lake.wi.us/gisweb/doc/download/OpenData/	https://ascent.co.green-lake.wi.us/LandRecords/	https://tapestry.fidlar.com/Tapestry2/

Single Landing Page/Portal for All Land Records Data
URL
https://gis.co.green-lake.wi.us/gisweb/gallery/

Web Services/REST End Points
URL
https://gis.co.green-lake.wi.us/arcgis/rest/services

Data Sharing

Data Availability to Public

Data Sharing Policy

- Green Lake County will provide a no-fee means of accessing land information through the websites listed above
- 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 either the actual cost to reproduce the data, or a statutory set fee.

Open Records Compliance

- Green Lake County complies with Wisconsin's Open Records Law

Data Sharing Restrictions and Government-to-Government Data Sharing

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

4 CURRENT & FUTURE PROJECTS

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 aim. Projects can be thought of as the *means* to achieving the county's mission for its land information system.

Project Plan for PLSS (Benchmark 4)

Project Title: Project Plan for PLSS (Benchmark 4)

Project Description/Goal

Planned Approach

- Contract annually as budget allows for PLSS remonumentation with survey grade GPS coordinates for all corners in the county - integrating corners into the parcel fabric will be done in-house by the GIS Specialist

Current Status

- **Tally of the total number of corners:** See PLSS Layer Status table in Chapter 2
- **Remonumentation status:** See PLSS Layer Status table in Chapter 2
- **Coordinate status (accuracy class) if known:** See PLSS Layer Status table in Chapter 2

Goals

- **Number of corners to be remonumented and/or rediscovered:**
  - 2020/52, 2021/71, 2022/68, 2023/68
- **Number to have new coordinates established:** all
- **Accuracy class for these new coordinates:** Survey Grade
- **Way in which these points will be integrated into the parcel fabric:** In-house

Missing Corner Notes

- **Documentation for any missing corner data:** Current plan is to remonument all corners

County Boundary Collaboration

- The County Surveyor and Highway Commissioner will work with neighboring counties to maintain new or existing PLSS including those corners affected by Highway projects

Business Drivers

- The Project Plan for PLSS is a requirement for those counties who utilize Strategic Initiative funds for work related to PLSS completion and integration.
- 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
- It would be ideal to have all areas of the county mapped to the same level of accuracy

Objectives/Measure of Success

- The objective is to meet Benchmark 4 (Completion and Integration of PLSS) by 2025

Project Timeframes

Timeline – Project Plan for PLSS

Milestone	Duration	Date
89% of PLSS remonumented	2 year	Jan. 1, 2020 - Dec. 31, 2021
93% of PLSS remonumented	2 year	Jan. 1, 2021 - Dec. 31, 2022
96% of PLSS remonumented	2 year	Jan. 1, 2022 - Dec. 31, 2023
100% of PLSS remonumented	2 year	Jan. 1, 2023 - Dec. 31, 2024

Responsible Parties

- Contractor & GIS Specialist

Estimated Budget Information

- See table at the end of this chapter.

Project #1: Oblique Imagery Update

Project Description/Goal

- Collect new oblique imagery every 5 years
- **Land Info Spending Category:** Orthoimagery

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
- Obliques vital to Public Safety & Emergency Management, Land Use Planning & Zoning, and Land Conservation departments

Objectives/Measure of Success

- Project completion marked by Obliques being available for viewing online locally and by the public

Project Timeframes

Timeline – Project #1: Oblique Imagery Update

Milestone	Duration	Date
Collect spring obliques and process through the summer QC and finalize by the fall	9 months	April - Dec, 2022

Responsible Parties

- Contractor

Estimated Budget Information

- See table at the end of this chapter.

Project #2: Import Surveys into Imaging

Project Description/Goal

- Migrate survey images into Register of Deeds imaging system
- **Land Info Spending Category:** Other Parcel Work

Business Drivers

- Outdated "Survey Records Search" application requires upgrading
- Leverage existing and modern Register of Deeds imaging system

Objectives/Measure of Success

- Safe long term storage of survey documents
- Convenient access to documents

Project Timeframes

Timeline – Project #2: Import Surveys into Imaging

Milestone	Duration	Date
Study current storage method fall of 2022 for possible 2023 project	6 months	Oct 2022 – Mar 2023

Responsible Parties

- Imaging Vendor

Estimated Budget Information

- See table at the end of this chapter.

Project #3: Move GIS to the Cloud

Project Description/Goal

- Move GIS from local server to cloud hosting
- **Land Info Spending Category:** Software

Business Drivers

- Eliminate need for local server maintenance and upgrades
- Scalability of mapping website public access
- Remote access supports the departments "Continuation of Operations Plan"

Objectives/Measure of Success

- Decommissioning of local server
- New documented workflow for cloud based GIS SOP's (Standard Operating Procedures)
- Strong ESRI ArcGIS presence

Project Timeframes

Timeline – Project #3: Move GIS to the Cloud

Milestone	Duration	Date
Spring install of software moving into production status by fall	6 months	April - Sept, 2022

Responsible Parties

- GIS Specialist

Estimated Budget Information

- See table at the end of this chapter.

Project #4: Scan Zoning Records

Project Description/Goal

- Scan and index zoning records and make them available to the public over the internet
- **Land Info Spending Category:** Other Parcel Work

Business Drivers

- Zoning officials need remote access to documents as part of the departments "Continuation of Operations Plan"
- Paper documents need an improved archival storage and retrieval system

Objectives/Measure of Success

- Safe long term storage of paper documents
- Proven ease of access to documents

Project Timeframes

Timeline – Project #4: Scan Zoning Records

Milestone	Duration	Date
Study current storage method fall of 2023 for possible 2024 project	6 months	Oct 2023 – Mar 2024

Responsible Parties

- Contractor

Estimated Budget Information

- See table at the end of this chapter.

Project #5: Scan Old Parcel Books and Tax Rolls

Project Description/Goal

- Scan old parcel map books for archival storage and retrieval
- **Land Info Spending Category:** Digital Parcel Mapping

Business Drivers

- Land Records officials need remote access to documents as part of the departments "Continuation of Operations Plan"
- Paper documents need an improved archival storage and retrieval system

Objectives/Measure of Success

- Safe long term storage of paper documents
- Proven ease of access to documents

Project Timeframes

Timeline – Project #5: Scan Old Parcel Books and Tax Rolls		
Milestone	**Duration**	**Date**
Study current storage method fall of 2022 for possible 2023 project	6 months	Oct 2022 – Mar 2023

Responsible Parties

- Contractor

Estimated Budget Information

- See table at the end of this chapter.

Project #6: Land Records Hosting

Project Description/Goal

- Migrate Land Records, Permit Management, and Land Conservation Transcendent Technologies Ascent software suites and data to be cloud hosted
- **Land Info Spending Category:** Software

Business Drivers

- Balance infrastructure cost compared to local hosting requirements
- Help balance and prioritize IT in-house human resource demands
- Off-site hosting supports the departments "Continuation of Operations Plan"

Objectives/Measure of Success

- Seamless, secure, and coordinated integration of cloud hosted Land Records with other county IT infrastructure
- Reliable monitoring, backup, recovery, maintenance, and upgrades with cloud system

Project Timeframes

Timeline – Project #6: Land Records Hosting		
Milestone	**Duration**	**Date**
Spring system migration moving into stable production status by fall	12 months	Jan - Dec, 2024

Responsible Parties

- Land Records Software Vendor

Estimated Budget Information

- See table at the end of this chapter.

Project #7: NG911 Updates

Project Description/Goal

- Update Address Point & Street Centerline layers to support the NG911 data model
- **Land Info Spending Category:** Address Points & Street Centerlines

Business Drivers

- Use standard data model so data can be merged at the state level
- Meet data requirements of NG911 software

Objectives/Measure of Success

- Accurate address mapping of 911 calls in dispatch center
- Improved integration and compatibility with other counties

Project Timeframes

Timeline – Project #7: NG911 Updates

Milestone	Duration	Date
Deadlines for NG911 not definite	12 months	Jan - Dec, 2023

Responsible Parties

- GIS Specialist

Estimated Budget Information

- See table at the end of this chapter.

Project #8: Education and Public Outreach

Project Description/Goal

- Develop and maintain County Land Information outreach display
- Present outreach display at annual County Fair
- **Land Info Spending Category:** Training and Education

Business Drivers

- Educate public on land information services available
- Educate public on use of services

Objectives/Measure of Success

- High number of display visitors
- Productive interaction of public with display
- Productive feedback on display content

Project Timeframes

Timeline – Project #8: Education and Public Outreach

Milestone	Duration	Date
Annual county fair display early August	repeating	Aug, 2022-2023-2024

Responsible Parties

- Land Information Officer

Estimated Budget Information

- See table at the end of this chapter.

Project #9: Multi-function large format printer/scanner

Project Description/Goal

- Replace large format printer, purchase 25" manual cold roll laminator, and 36" rotary trimmer
- Subscribe to annual support contract
- Replenish printer supplies such as ink cartridges, printer heads, laminating film, and paper rolls
- **Land Info Spending Category:** Hardware

Business Drivers

- Nearing end of current printer production and support lifecycle
- Minimize downtime of print services due to mechanical failure

Objectives/Measure of Success

- Consistent large format printing with limited downtown
- Improved economy of printing

Project Timeframes

Timeline – Project #9: Multi-function large format printer/scanner

Milestone	Duration	Date
Begin trial program early fall and complete purchase at end of trial period	4 months	Sept - Dec, 2024

Responsible Parties

- Vendor

Estimated Budget Information

- See table at the end of this chapter.

Project #10: GPS Hardware

Project Description/Goal

- Purchase additional GPS unit for the Land Conservation Dept.
- Transfer current GPS unit to the Highway Dept.
- **Land Info Spending Category:** Hardware

Business Drivers

- Nearing end of current GPS production and support lifecycle
- Minimize conservation project delays due to GPS hardware problems
- Current GPS does not support iPad iOS, it only supports Android
- This GPS equipment is also used at times for GIS data collection and Emergency Management damage assessment

Objectives/Measure of Success

- Integration of GPS technology throughout multiple depts.
- Improved accuracy of project mapping

Project Timeframes

Timeline – Project #10: GPS Hardware

Milestone	Duration	Date
Complete purchase and training early in year	3 months	Jan - Mar, 2022

Responsible Parties

- Vendor

Estimated Budget Information

- See table at the end of this chapter.

Estimated Budget Information (All Projects)

Estimated Budget Information

Project Title	Item	Unit Cost/Cost	Land Info Plan Citations Page # or section ref.	Project Total
Project Plan for PLSS (Benchmark 4)	90% PLSS remonumentation with survey grade GPS coordinates	$1,400 X 250 = $350,000 Grothman contract	Page 24	–
	Integrate PLSS with parcel mapping	$10,000 X 3 years = $30,000 In-house GIS Specialist		–
				$380,000
1) Oblique Imagery Update	Contract with EagleView	$100,000	Page 24	–
				$100,000
2) Import Surveys into Imaging	Contract with Fidlar	$10,000	Page 24	–
				$10,000
3) Move GIS to the Cloud	Contract with ESRI	$10,000	Page 25	–
				$10,000
4) Scan Zoning Records	Contract with Intern	$40,000	Page 25	–
				$40,000
5) Scan Old Parcel Books and Tax Rolls	Contract with Fidlar	$20,000	Page 26	–
				$20,000
6) Land Records Hosting	Contract with Transcendent	$10,000	Page 26	–
				$10,000
7) NG911 updates	Contract with GeoComm	$10,000	Page 27	–
				$10,000
8) Education and Public Outreach	Booth Displays	$2000 x each of 3 years	Page 27	–
				$6,000
9) Multi-function large format printer/scanner	HP printer Annual HP Support HP supplies	$10,000 $1000 x each of 3 years $1000 x each of 3 years	Page 28	–
				$16,000
10) GPS Hardware	Turning Point – Carlson Seiler – Trimble	$15,000 $3,000	Page 28	
				$18,000
			GRAND TOTAL	**$620,000**

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