

Langlade County Land Information Plan 2025-2027



Langlade County Land
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EXECUTIVE SUMMARY

About this Document. This document is a land information plan for Langlade County prepared by the land information officer (LIO) and the Langlade 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 2023, Langlade County was awarded \$131,448 in WLIP grants and retained a total of \$33,752 in local register of deeds document recording fees for land information.

This plan lays out how funds, 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. In addition, changes to state government and the health of the economy have had a significant impact on grant funding both good and bad.

The LIO, the Land Information Council, land information users, the County Water and Land Use Planning Committee and others close to the County Land Records modernization efforts will, when the chances arrive, remind our County Board supervisors that the Land Record funds are to be used for projects to enhance the local land information efforts and should not be used to replace general budget expenses.

Land Information in Langlade 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 Langlade 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, Langlade County’s Land Information Office will strive to provide timely and accurate data to the public in an easily accessible manner. Accessibility of a system, even if it is perfect means nothing without people using it. The development of higher quality information will lead to better 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, businesses, and other departments.

Land Information Office Projects. To realize this mission, in the next three years, the county land information office will focus on the following projects. Some may not be completed but are listed here as a focal point:

Langlade County Land Information Projects: 2025-2027	
Project #1	ROD Public Access System Support
Project #2	Document Imaging Improvements
Project #3	Survey Resource Support
Project #4	Imagery Maintenance Project
Project #5	Improved Access to Land Records
Project #6	Emergency Government Support
Project #7	GIS Software Support
Project #8	Land Records Modernization: Data Migration
	On-going Costs Not Associated with a Specific Project: Full Time GIS Position

The remainder of this document provides more details on Langlade 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.

The Statewide Parcel Map Initiative

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

- 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 Langlade County is meeting these benchmarks appears in the Foundational Elements section of this plan document.

County Land Information System History and Context

A summary of Langlade County milestones through the years:

PROGRAM ACCOMPLISHMENT	YEAR
Land Records Advisory Committee created.	1989
Land Records & Regulations Department established as Land Information Office	1990
Register of Deeds begins collecting fees	1990
Strategic planning session to identify priorities	1990

Land Records Modernization Plan prepared & Adopted	1991, 1992
Full time appointed County Surveyor hired	1992
Geodetic control network surveyed	1993
\$50,000 grant received to purchase AutoCad & Geodetic network	1993, 1994
Purchase Geodimeter robotic survey equipment	1994
Feasibility study for optical imaging systems	1995
Hire Land Records Technician	1997
Mapping computer and software upgrade to AutoCad Map	1998
Land Records Modernization Plan Revision	1999
Purchase Leica RTK GPS equipment	2000
PC upgrades & purchase tax parcel database extraction tool	2001
Plan amendment to purchase equipment for WAN	2002
New aerial photography from Ayres Assoc.	2003
Started contract/w Point North Mapping, Hayward, WI for parcel mapping	2003
On-going parcel mapping	2003-2024
Rectified & MrSID aerial photography (NCWRPC & WI DNR partners)	2004
Update large map copier from Xerox to Oce TDS100	2005
County GIS web site on-line	2005
Started contract with ADC, Eau Claire, WI to host GIS website	2006
Contracted PLSS work, Town of Neva	2009
Update survey equipment to new robot, new base rover GPS	2009
Establish County Land Information Council Resolution 66-2010	2010
Orthophoto acquisition as part of WROC 12" photography	2010
Replaced HP 1050c plotter with HP2300 scanner/copier/large format printer	2011
Land Records Tech. vacant with person now being RPL, mapping now limited	2013
Update GPS to network rover	2013
Contract with NCWRPC for limited GIS/mapping updates	2015
Orthophoto acquisition as part of WROC 6" photography	2015
Hired GIS intern for GIS/mapping updates	2015
Hired full time GIS Coordinator	2016
Contracted PLSS work completed on County Boundary	2017
1st Parcel Layer submitted to state at 100% & searchable format	2017
LIDAR flown by Ayers with delivery	2017, 2018
Orthophoto acquisition as part of WROC 6" photography	2020
PLSS tie sheets & data incorporated into GIS website	2020
Replaced HP2300 with HP XL3600 Plotter	2021
Pre-1991 Tie Sheet Corner Maintenance Completed	2023
GIS website transitioned from ADC to Beacon	2023
Real Estate Information transitioned from AS-400 to Catalis	2023
Next Gen 911 Project Completed	2023
Online Survey Map Project	2024
Assisted in the publication of Plat Book	2024

County Land Information Plan Process

Counties must submit their plans to DOA for approval every three years. The 2025-2027 plan is to be completed at the end of 2024.

County Land Information Plan Timeline

- DOA release of finalized instructions by March 31, 2024.
- April-September 2024: Counties work on land info plans.
- Complete draft plans due to DOA by September 30, 2024 (but sooner is advised).
- Final plans with county land info council approval due by December 31st, 2024.

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, the Langlade County Land Information Council, and others as listed below.

Langlade County Land Information Council and Plan Workgroup				
Name	Title	Affiliation	Email	Phone
+Brenda Mayr	Register of Deeds	Langlade County Register of Deeds Office	bmayr@co.langlade.wi.us	715-627-6209
+Tammy Wilhelm	County Treasurer	Langlade County Treasurer's Office	twilhelm@co.Langlade.wi.us	715-627-6204
+Matt Sumnicht	Real Property Lister	Langlade County Land Records & Regulations	msumnicht@co.langlade.wi.us	715-627-6342
+Rich Bina	County Board Member	Langlade County Board	district14@co.langlade.wi.us	715-216-0155
+Duane Haakenson	Director LIO	Langlade County Land Records & Regulations	dhaakenson@co.langlade.wi.us	715-627-6208
+Ron Schroepfer	Realtor	ReMax Excel	Rschroepfer2@gmail.com	715-610-9100
+Mark Weston	County Sherriff	Langlade County Sherriff's Department	mwesten@co.langlade.wi.us	715-627-6401
+Charley Brinkmeier	City Surveyor	City of Antigo/ Registered Surveyor	cbrinkmeier@city-antigo.org	715-623-3633
+Paula Pregler	Title Agent	Langlade Abstract Company	paula_pregler@yahoo.com	715-627-4470
Chris Arrowood	Assistant Director	Langlade County Land Records & Regulations	carrowood@co.langlade.wi.us	715-627-6291

+ Land Information Council Members designated by the plus symbol

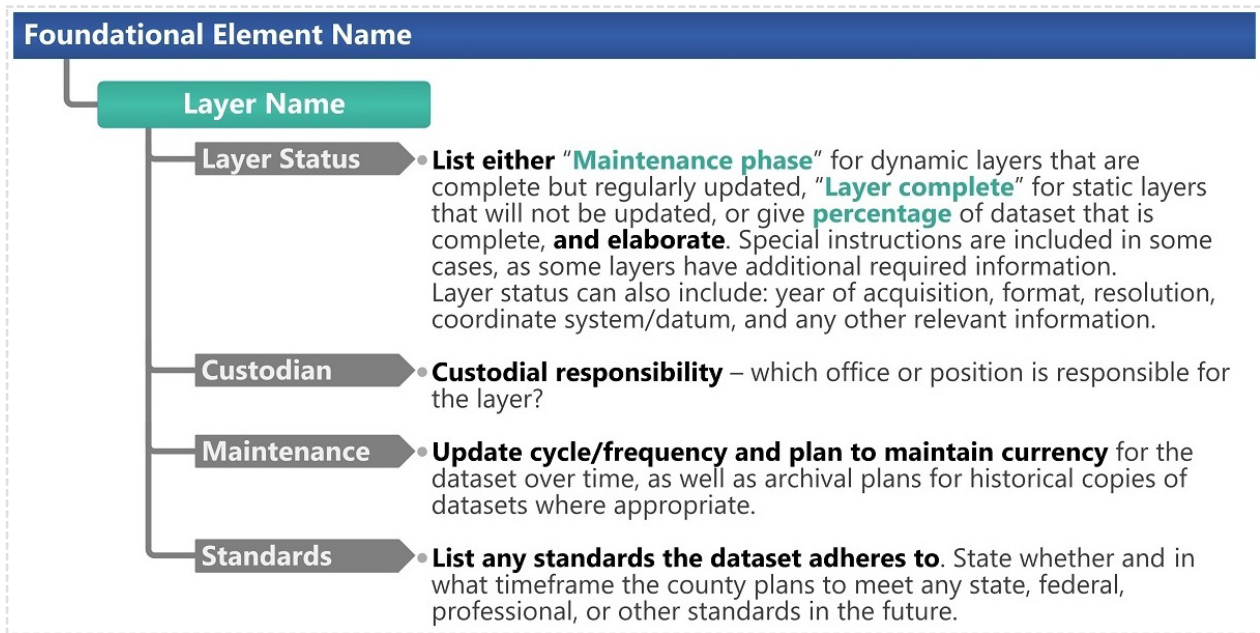
2 FOUNDATIONAL ELEMENTS

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.

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.

FOUNDATIONAL ELEMENTS

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



PLSS

Public Land Survey System Monuments

Layer Status

PLSS Layer Status

	Status/Comments
Number of PLSS corners (selection, ¼, meander) set in original government survey that can be remonumented in your county	<ul style="list-style-type: none"> Approximately 3,200
Number of PLSS corners capable of being remonumented in your county that have been remonumented	<ul style="list-style-type: none"> Approximately 2,600
Number of remonumented PLSS corners with survey grade coordinates (see below for definition) <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 1188 have Survey Grade quality coordinates 715 have Sub-Meter quality coordinates 733 have Approximate quality coordinates with 5 meters or less
Number of survey grade PLSS corner coordinates integrated into county digital parcel layer (see definition of PLSS integration on page 37)	<ul style="list-style-type: none"> 1188
Number of non-survey grade PLSS corner coordinates integrated into county digital parcel layer	<ul style="list-style-type: none"> 1297
Tie sheets available online?	<ul style="list-style-type: none"> Yes: https://beacon.schneidercorp.com/Application.aspx?App=Lan gladeCountyWI&PageType=Map
Percentage of remonumented PLSS corners that have tie sheets available online (whether or not they have corresponding coordinate values)	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 100%
PLSS corners believed to be remonumented based on filed tie-sheets or surveys, but do not have coordinate values	<ul style="list-style-type: none"> 59
Approximate number of PLSS corners believed to be lost or obliterated	<ul style="list-style-type: none"> 280 ±
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)?	<ul style="list-style-type: none"> Romportl numbering system
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?	<ul style="list-style-type: none"> No
Total number of PLSS corners along each bordering county	<ul style="list-style-type: none"> 268 Total (40 Oneida + 37 Forest + 38 Oconto + 46 Menominee + 25 Shawano + 33 Marathon + 49 Lincoln)
Number of PLSS corners remonumented along each county boundary	<ul style="list-style-type: none"> 234 Total (36 Oneida + 25 Forest + 27 Oconto + 46 Menominee + 24 Shawano + 32 Marathon + 44 Lincoln)
Number of remonumented PLSS corners along each county boundary with survey grade coordinates	<ul style="list-style-type: none"> 202 Total (33 Oneida + 22 Forest + 24 Oconto + 40 Menominee + 21 Shawano + 26 Marathon + 36 Lincoln)

Custodian

- Land Records & Regulations Department

Maintenance

- Land Records & Regulations Department
- Private surveys are required by A-E 8, Wisconsin Administrative Code
- Update Cycle / Frequency: If / When County Surveyor position filled. Some work with private contractor.

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.
- North American Terrestrial Reference Frame of 2022 (NATRF2022)
- **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

- Langlade County had a network of 48 geodetic control monuments (1,2 and 10 ppm). This network was installed in 1993 and GPS surveyed in 1994 by a contractor working with adjoining the counties of Oneida and Shawano and using specifications recommended by the WIDOT. The network results were originally surveyed on the NAD81(91) datum and are available through the State Cartographers Office (SCO) Survey Control Finder website. It is likely the County network will receive no further densification due to the fact that most surveyors are now using the RTK GPS instruments with correction data from the WISCORS network, which does not require local control monuments. The WISCORS network is currently on the NAD81(2011) datum. From field work with a GPS network rover, there is negligible difference in coordinate data in Langlade County between the existing NAD83(91) network points and values obtained in NAD83(2011) datum with GPS network rovers utilizing the WISCORS correction service.

Custodian

- WIDOT – HARN and WISCORS stations
- Langlade County Land Records – County network

Maintenance

- WIDOT – HARN and WISCORS stations
- Langlade County Land Records – County network

Standards

- HARN – National Standard for Spatial Data accuracy available at:
<https://www.fgdc.gov/standards/projects/FGDC-standards-projects/accuracy/part2/chapter2>
- County Network – WIDOT and NGS publication 59:
https://www.ngs.noaa.gov/PUBS_LIB/NGS592008069FINAL2.pdf

Parcel Mapping

Parcel Geometries

Layer Status

- **Progress toward completion/maintenance phase:** In Langlade County, 100% of the county's parcels are available in a commonly-used digital GIS format. The data was initially a collection of townships done in AutoCad and converted into an ESRI ArcMap format. To keep the layer complete is an ongoing task of the GIS Technician, the level of accuracy and error correction is also ongoing. Updated PLSS corner data sometimes requires adjustment to specific areas.
- **Projection and coordinate system:** Parcel mapping is being done in the Langlade County Coordinate system developed by the WiDOT and is on the NAD(83)2011 datum. It is expected there will be an adjustment to this when the 2022 Datum is released.
- **Integration of tax data with parcel polygons:** The county does have a parcel polygon model that directly integrates tax/assessment data as parcel attributes. They can be joined together using the Parcel ID field, but this process is not yet automated.
- **Online Parcel Viewer Software/App and Vendor name:**

Platform	Technology	Hosted by	Implemented by	Maintained by
Esri ArcGIS	Map Viewer	ArcGIS Enterprise	In-house	In-house
Non-Esri	Beacon	Schneider Geospatial	Schneider Geospatial	Schneider Geospatial

- **Unique URL path for each parcel record:**
 - Yes
 - Parcel attribute information viewable: Ownership; tax assessment data, tax history including bills & payments; some recorded document information.
 - [https://beacon.schneidercorp.com/Application.aspx?AppID=1213&LayerID=36773&PageTypeID=4&PageID=14062&Q=992568928&KeyValue=\[PIN\]](https://beacon.schneidercorp.com/Application.aspx?AppID=1213&LayerID=36773&PageTypeID=4&PageID=14062&Q=992568928&KeyValue=[PIN])
 - URLs cannot be exported.

Custodian

- GIS Staff in the Langlade County Land Records & Regulations Department

Maintenance

- **Update Frequency/Cycle:** There are over 30,000 parcel polygons in the county. Maintenance is at a minimum of a weekly task in one way or the other. Each year a major update is done after completion of the Real Property Cycle.
- Updates are sent on an as needed basis, but at least annually for our Beacon GIS county website link.

Standards

- **Data Dictionary:** Metadata exists. The Langlade County Parcel Layer itself has a very minimal number of fields which are joined to tax data per the ParcelID field. The tax data is automatically sent nightly to our vendor Schneider Geospatial and there the Parcel data and tax data are joined together. The tax data is far more robust in size and the number of things it keeps track of.
- A data dictionary could be developed as fields are added to the Parcel Layer. Plans are to add WBIC, Zip Code, School address, and Municipality. Now that the AS400 system is replaced with Catalis, it is likely that the Parcel data be more easily configured to join with the tax data. Once stability in our GIS staffing has been achieved, a more robust definition of county specific notations seems probable.
- As state, federal, professional, or other standards are developed the county shall try to adhere to those within a reasonable time frame.

Parcels Without Land Value

Layer Status

- **Number of parcels without a land value recorded to-date:** 60 as of 10/14/2024
- **County geolocates/maps parcels for improvements only and without a land value by:**
- Creating New polygons and parcel

Assessment/Tax Roll Data

Layer Status

- **Progress toward completion/maintenance phase:** NA
- **Tax Roll Software/App and Vendor name:**
 - **Property Assessment & Tax Billing Module** – from contractor/vendor Catalis/LandNav
- **Municipal Notes:** The City of Antigo uses the county systems to manage their tax roll.

Custodian

- County Treasurer Office and local assessors
- Maintenance of records is handled by the Real Property Lister.

Maintenance

- **Maintenance of the Searchable Format standard:** To maintain the Searchable Format standard, the county will continue ongoing daily tasks. Map Data is handled by the GIS staff, property records & other assessment information are maintained by the Real Property Lister.
- **Searchable Format Workflow:**
 - The county maintains parcel/tax roll data in such a way that requires significant formatting every year—whether by the county staff in-house, or a third-party contractor/vendor.

Standards

- Wisconsin Department of Revenue [Property Assessment Manual](#) and attendant DOR standards
- DOR XML 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

Non-Assessment/Tax Information Tied to Parcels

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

Layer Status

- The AS/400 contains a wide variety of information tied to parcels. Efforts are being made to transition to a new recordkeeping system.
- Fill & Grade Permits, Subdivision Permits, Conditional Use Permits (CUP)
- Zoning Permits & Amendments, Grant of Variance (GOV)
- Sanitary Permits, Maintenance for Sanitary Systems, Soil Tests, Inspections

Complaint & Violations Custodian

- Land Records & Regulations Department

Maintenance

- Daily or as needed when those items come up
- Per the WI Admin Code (DSPS 383) we maintain a program for all private sewage systems

Standards

- Sanitary Ordinances based on WI Statute 145 – SPS 383 for Sanitary Standards
- County Ordinances – Zoning, Land Division, etc.
- WI Administrative Code
- WI State Statutes

ROD Real Estate Document Indexing and Imaging

Layer Status

- **Grantor/Grantee Index:** * The Register of Deeds (ROD) has a computerized grantor / grantee index beginning in 1987, prior to that year the index is in Volume / Page format back to July 1881.*
- **Tract Index:** * The Register of Deeds tract index dates back to 1881 in Volume / Page Format, with a computerized tract system being established in 1994. Tracting is PLSS based until a new Plat or CSM is recorded at which time further conveyances are then tract to the new Plat or CSM. Most commonly recorded are conveyance documents; mortgages, liens, affidavits, lis pendens, covenants and easements.

- The ROD currently has made its electronic tract index available online via LANDSHARK Direct back to July 1994, with images available back to 1994. Individuals may search via grantor / grantee, document number, or legal description. There is currently no charge to utilize this system to perform a search of the index; however, documents may only be viewed upon being purchased at the rate set by WI State Statute. *
- **Imaging:** * The Register of Deeds office has back-scanned and imaged all documents from 1/3/94 and those images are available in the office; additionally, all Plats, Cemetery Plats, Transportation Plats and CSM's are available in digital format.*
- **ROD Software/App and Vendor Name:**
 - * **Landshark** – from contractor/vendor Trimin *

Custodian

- County Register of Deeds

Maintenance

- * Langlade County Register of Deeds. Frequency - Daily*

Standards

- s. 59.43, Wis. Stats. Register of deeds; duties, fees, deputies.
- ch. 706, Wis. Stats. Conveyances of real property; Recording; Titles.
- ch. 236, Wis. Stats. Platting, csms
- ch. 70.27, Wis. Stats. Assessor Plats
- ch. 157.07, Wis. Stats. Cemetery Plats
- ch. 703, Wis. Stats. Condominiums
- ch 84.095 (8), Wis. Stats. Transportation Project Plats

LiDAR and Other Elevation Data

LiDAR

Layer Status

- **Most recent acquisition year:** 2017
- **Accuracy:** LiDAR point cloud calibrated to support the development of a bare earth surface model (DEM) to meet the following vertical accuracy requirements:
 - RMSEz (non-vegetated) \leq 10 cm (Point Cloud and DEM)
 - NVA \leq 19.6 cm at 95% confidence level according to NSSDA standards (Point Cloud and DEM)
 - VVA \leq 29.4 cm at 95th percentile level according to ASPRS guidelines (DEM Only)
- **Post spacing:** 0.7 meters, single swath pulse spacing to achieve 2 points per square meter nominal density.
- **Contractor's standard, etc.:** The lidar project was conducted under a cooperative agreement with Wisconsin DOA and USGS-3DEP. Ayres Associates performed the work adhering to the USGS LiDAR Base Specification Version 1.2 to meet the USGS definition of Quality Level 2 (QL2) required under 3DEP. The lidar data undergoes review by USGS for compliance with the specifications prior to acceptance and publishing.
- **Next planned acquisition year:** unknown, but the typical Wisconsin cycle is 8-12 years which would put 2025 – 2029 as the anticipated time frame.
- **QL0/QL1/QL2 acquisition plans:** None at this time.

Custodian

- Langlade County Land Records Department

Maintenance

- This was the first countywide lidar project completed in Langlade County. The maintenance and update cycle is dependent on landscape and development change over time, funding opportunities, and advancements in lidar technology. The typical update cycle for similar counties in Wisconsin is 8-12 years.

Standards

- LiDAR data and derivative products conform to specifications defined in the USGS “National Geospatial Program LiDAR Base Specification Version 1.2”. LiDAR data will meet the USGS definition of Quality Level 2 (QL2)

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

- Calibrated Raw Swath Point Cloud
- Classified Point Cloud
 - Class 1: Processed, by unclassified
 - Class 2: Bare-earth ground
 - Class 5: High Veg
 - Class 6: Building
 - Class 7: Low Noise
 - Class 9: Water
 - Class 10: Ignored ground (breakline proximity)
 - Class 17: Bridge Decks
 - Class 18: High Noise
- Hydro flattening breaklines
- Pondered water 2 acres or greater and double line streams 20 feet or greater
- Bare Earth DEM
 - 32-bit floating point grid
- Bare Earth Contour dataset
 - 1', 2', and 5' contours
- Intensity Imagery
 - 8-bit, 256 color gray scale
- LiDAR acquisition and processing reports, including
 - Data Collection report with flight logs
 - Survey report with calibration control points
 - Processing report for generation of products
 - Vertical Accuracy Report (NVA and VVA)
 - FGDC metadata

Custodian

- Langlade County Land Records Department

Maintenance

- This was the first countywide lidar project completed in Langlade County. The maintenance and update cycle is dependent on landscape and development change over time, funding opportunities, and advancements in lidar technology. The typical update cycle for similar counties in Wisconsin is 8-12 years, but will be determined by local demand and available resources. No maintenance is anticipated during this plan period.

Standards

- LiDAR data and derivative products conform to specifications defined in the USGS “National Geospatial Program LiDAR Base Specification Version 1.2”. LiDAR data will meet the USGS definition of Quality Level 2 (QL2).

Other Types of Elevation Data

Layer Status

- Contours – 10 Feet

Custodian

- North Central Wisconsin Regional Planning Commission

Maintenance

- Updated as new DEM becomes available

Standards

- USGS 10-meter DEM

Orthoimagery

Orthoimagery

Layer Status

- **Most recent acquisition year:** 2020
- **Resolution:** 6"
- **Contractor's standard:** ASPRS Class II standards
- **Next planned acquisition year:** 2025

Custodian

- Land Records & Regulations Department & County IT Department

Maintenance

- Orthoimagery once taken is a snapshot in time, there is an increased level of activity to maintain this data. The 2020 MrSID delivered was of much higher quality, around 5 times the size of the 2015 file. This certainly improves the quality of the image and also requires a certain amount of additional maintenance. Due to that size, the types of data transfer over the internet is reduced with various hardware options often used. These include an External Hard Drive or larger Thumb Drive as examples.

Standards

- ASPRS Class II standards.

Historic Orthoimagery

Layer Status

- Several digital layers exist and are available through our GIS Vendor website, the others we have stored locally:
<https://beacon.schneidercorp.com/Application.aspx?App=LanladeCountyWI&PageType=Map>
- 2020 3" City of Antigo resolution
- 2015 6" resolution
- 2010, 2015 City of Antigo 6" resolution
- 2010 Countywide 12" leaf off aerial
- 2008 NAIP 1 meter color aerial
- 2006 NAIP 1 meter B/W aerial
- 2003 Black / White aerial
- 1998 NRCS Quad Maps on CD
- 1996 NAPP Black / White in the Land Records & Regulations Office

Custodian

- Land Records & Regulations Department
- North Central Wisconsin Regional Planning Commission (NCWRPC) has copies of older data from 1990 & 1992.

Maintenance

- Some of the data is available on our GIS website, some of the data is backed up on our network other data is held in external hard drives or CD's.

Standards

- TIF's, SIDS, other readable formats. The anticipated 2025 flight will be done to meet current layer standards. Unknown standard specs for the various imagery types.

Other Types of Imagery

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

Layer Status

- The County has no other digital imagery besides those listed above. Several black / white folders full of imagery exist for 1997 & 1988. There is a flight index to go with that imagery.

Custodian

- Land Records & Regulations Department

Address Points and Street Centerlines

Address Point Data

Layer Status

- All county parcels with an existing dwelling or permanent structure such as a garage are eligible for a physical address. Addresses are tied to Parcel Numbers. Updates to this layer are supplied as requested to County Sherriff dispatch center, fire departments, towns, etc. The City of Antigo and Village of White Lake have their own systems. We are working towards a more cohesive system with the understanding that NG911 will have more demands on the Addressing Point Data.

The City and County are working more closely together to have an improved uniform address file for the whole county. Since 2020 the improvement of this neglected work has been an ongoing project, but cleanup is quite extensive and time consuming. Meetings to address future program concerns are in progress.

Note: With the county switch of vendors to Central Square in 2018 there is an increased accuracy both on the physical side and computer side to the highest of standards. Their terminology for the system is Computer Aided Dispatch (CAD). This vendor is also used by Marathon County, and has many NG911 ready tools built in.

Custodian

- City of Antigo for the addressing within the City of Antigo
- Village of White Lake Public Works Director responsible for Village of White Lake addressing
- Land Records and Regulations Department for overall stewardship of the county

Maintenance

- Intermittent

Standards

- Wisconsin GIS NG9-1-1 Data Standard (Site/Structure Address Point) is the Goal
- The county follows US Postal and NENA standard as a guideline

Building Footprints

Layer Status

- A building location layer was created manually using aerial imagery from 2015 by the NCWRPC. The Code Administrator has made changes to this data over time and it is quite robust. With the addition of LIDAR data, the county will likely do some extraction work to pull those footprints out of future datasets to enhance the accuracy of the information.
- Footprints are more important than they seem for helping to determine many things related to Broadband Services and Emergency Management. It is the second criteria on the list of things an Internet Service Provider (ISP) likes to gather to be able to plan appropriately when expanding internet capabilities. Additionally, ArcGIS Pro has some new tools to extract buildings which will likely be pursued in the future.

Custodian

- Land Records & Regulation Department

Maintenance

- As information is gathered or needed

Standards

- None

Building Footprints – Microsoft Open Sources

Layer Status

- A new building footprint layer was created digitally and released June 28th, 2018 by Microsoft for Open Source information. The GIS Coordinator extracted out Wisconsin and then Langlade County to have another layer to use and compare when investigating Building Footprint data.

Custodian

- Land Records & Regulation Department

Maintenance

- None will be done other than us using this layer in addition to others creating the most accurate and fully developed Building Footprints which we can provide.

Standards

- No standards adhered to if some exist

Street Centerlines

Layer Status

- The County has a centerline layer and address range for every public road and some private roads. The Sheriff's Department maintains the MSAG, with assistance from the Land Records & Regulations Department and from Regional Planning. Some of this information was done some years ago and is being updated as time and resources allow.

Custodian

- Langlade County Land Records & Regulations Department

Maintenance

- As needed

Standards

- Wisconsin GIS NG9-1-1 Data Standard (Road Centerline)
- The county uses USPO standards as much as possible and tries to follow NENA naming convention standards when possible.

Rights of Way

Layer Status

Mostly complete, perhaps 65% in all. The completed portion of the Right of Way (ROW) is included as part of the Parcel Layer. The attributes relating to the Right of Ways (ROW's) are listed as PARCELID Numbers using ROW and then a Municipality Number. An individual file does exist for each township and it is hoped this could help with the Gas Tax Maps overview too.

Custodian

- Highway Department, Land Records Department

Maintenance

- Land Records Department

Standards

- There are some which will be adhered to depending on the type of roadway and township. We use 66 feet prescribed in Ch. 82, Wis. Stats. if no other information can be found from Highway Maps and so forth.

Trails

e.g., Recreational Trails, Snowmobile Trails

Layer Status

- The County Forestry and Recreation Department maintains a comprehensive recreational trail layer of the trails that are funded, maintained, and coordinated through the County Forest and Recreation Department, along with a variety of volunteer user groups or clubs. This layer does not include the City of Antigo, or privately maintained trail systems throughout the County. The trails include The Ice Age National Scenic Trails, hiking, horse riding, and mountain biking.
- Snowmobile and ATV Clubs are looking at adopting the same type of grid system for

emergency purposes. That is a new development for the 2021-22 Winter trail maps. This is also in conjunction with the Forestry Department and Emergency Management.

Custodian

- Langlade County Forestry, Parks and Recreation Department

Maintenance

- Semi-annually or as needed. Need for maintenance currently is acknowledged.

Standards

- ESRI geodatabase polygon / polyline layer with trail specific attribute table.

Land Use

Current Land Use

Layer Status

- 2020 Existing Land Use. Air photo interpretation by NCWRPC.

Custodian

- NCWRPC

Maintenance

- NCWRPC updates the existing land use layer. Every 5 years with the imagery.

Standards

- Use the land use classification of NCWRPC

Future Land Use

Layer Status

- Future Land Use as shown in the 2019 Langlade County Comprehensive Plan.

Custodian

- NCWRPC

Maintenance

- NCWRPC

Standards

- 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. NCWRPC completed the Langlade County Comprehensive Plan in 2019.

Zoning

County General Zoning

Layer Status

- The county has a Zoning coverage layer for the townships that have adopted comprehensive zoning. In addition, the remaining townships which do not fall under County Zoning still abide by the Zoning Standards for use of Shorelands along Navigable Waters set for by the DNR. The City of Antigo and Village of White Lake have some of their own zoning which is not in the County Zoning Layer. In 2020 a layer based on Parcels instead of the older hand drawn zoning maps was done in draft form. It does need more work but will be tied to the parcel ID for connectivity with Tax & Land Records permitting systems at some point allowing a Zoning field to be seen by the Public when looking up their property report.

Custodian

- Langlade County Land Records & Regulations Department

Maintenance

- Yearly or as needed when re-zoning requests are approved.
- Last update April 2018
- Zoning Amendment (ZA) field updated from 2016 on, older numbers not available or added

Standards

- ESRI geodatabase polygon layer with zoning code attribute and zoning amendment.

Shoreland Zoning

Layer Status

- Administered by the County, but not in GIS format as a separate individual Shoreland Zoning layer. The Shoreland Zoning is in effect throughout the entire county including the Townships of Evergreen, Langlade, Summit and Upham. As part of the Zoning GIS layer the evidence of this is an area 1000 feet of the ordinary high water mark on navigable lakes, ponds, and flowages (NR 115.03(8)). NR refers to the Natural Resources Administrative Code. Another area included here is 300 feet off the ordinary high water mark of navigable rivers, or streams, or to the landward side of the floodplain, whichever distance is greater (NR 115.03(8)). The determination for this is presumed if they are listed in the Wisconsin Department of Natural Resources publication FH-800 2009 "Wisconsin Lakes" book or as shown on USGS Survey quadrangle maps (1:24,000 scale).

Custodian

- Langlade County Land Records & Regulations Department

Maintenance

- As needed

Standards

- Not as its own layer, but as part of the Zoning Layer which does adhere to the ESRI geodatabase polygon layer with zoning code attribute and zoning amendment.

Farmland Preservation Zoning

Layer Status

- The County does maintain a GIS representation of county farmland preservation zoning boundaries.
- **Year of certification:** 2015
 - This layer is due to be recertified by 12/31/2025, GIS dataset has been maintained to only reflect zones remaining in the district.

Custodian

- Langlade County Land Records & Regulations Department

Maintenance

- The layer is modified on an "as needed" basis. When modifications take place, it is included in the cycle of updates sent to our GIS website vendor. **

Standards

- * ESRI geodatabase polygon / polyline layer

Floodplain Zoning

Layer Status

- The County does maintain a GIS representation of floodplain zoning boundaries.
- The county's floodplain zoning GIS data is not the same as/identical to the FEMA map
- The county's floodplain layer is the result of efforts to digitize pre-existing paper maps, errors are corrected when identified. New maps based on LIDAR data are anticipated in the near future.*

Custodian

- Langlade County Land Records & Regulations Department

Maintenance

- As needed.

Standards

- s.59.72(2)(a), Wis. Stats.

Airport Protection

Layer Status

- The County does maintain a draft GIS representation of the main Langlade County Airport protection zoning boundaries. This is based off of a PDF from a paper map from the Wisconsin Bureau of Aeronautics. The original date looks like 4/19/94. The GIS file for this will be further developed.
- The Langlade County Parcel Layer has some Aircraft Easement Information included around the airport. This is also shown as part of the annotation portion of the geodatabase file. It is at least partially drawn and can be easily seen through the aerial imagery from various years. There is a Langlade_airports.shp file. It contains some technical data about 4 airports within the county. There are dates listed and data about single / multi engine aircraft and some other technical data associated with the shapefile.

Custodian

- Land Records & Regulation Department

Maintenance

- As needed

Standards

- None

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

- The County zoning ordinance does not include the City of Antigo or the Village of White Lake, both entities have their own ordinances. The City of Antigo has and maintains its own GIS website with the URL being <https://antigo.ags.ruekert-mielke.com/>.

Custodian

- City of Antigo, Village of White Lake

Administrative Boundaries

Civil Division Boundaries

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

Layer Status

- County, Township, City, and Village boundaries complete.

Custodian

- Langlade County Land Records & Regulations Department

Maintenance

- As needed

Standards

- Local Ordinances

School Districts

Layer Status

- **Progress toward completion/maintenance phase:** This is completed and in maintenance phase as part of Catalis/LandNav tax data.
Relation to parcels: When merged with Parcel data using the PARCELID key field it provides a more complete picture. It is possible to extract a more accurate School District layer from the merged Tax – Parcel data.

- **Attributes linked to parcels:** The merged Tax Data & Parcel file has the Fields of School District and School District Number. An Example of parcel linked information would be Antigo Unified School District as the School District and 0140 as the School District Number.

Custodian

- Langlade Land Records and Regulations Department

Maintenance

- School Districts get updated from the County through the Catalis/LandNav as part of entering information on tax parcels. Updates from that system are sent to the GIS Vendor at least monthly in an automated process. The public sees one set of data when actually it is two joined together by the GIS Vendor to form a cohesive application. This process of combining tax and parcel information is repeated manually once a year for a Statewide Submission of a Complete Searchable Format Parcel layer.

Standards

s.59.72(2)(a), Wis. Stats.

Election Boundaries

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

Layer Status

- Voting Wards are created after the decennial census.

Custodian

- County Clerk's office

Maintenance

- The County updates the ward boundaries to reflect any annexations
- GIS Staff

Standards

- Ward boundaries are submitted through the LTSB data collection process twice per year.

Utility Districts

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

Layer Status

- The County does not host or maintain spatial utility data. There are several sanitary districts in the county for tax purposes. The City of Antigo maintains utility data on the City website for internal use only.

Emergency Service Boundary – Law/Fire/EMS

Layer Status

- **Law Enforcement:** As a shapefile for CAD – Central Square system
- **Fire:** As a shapefile for CAD – Central Square system
- **EMS:** As a shapefile for CAD – Central Square system
- **OTHER:** As a shapefile for CAD – Central Square system

Custodian

- Langlade County Sheriff's Office

Maintenance

- GIS Staff, North Central WI Regional Planning

Standards

- Wisconsin GIS NG9-1-1 Data Standard for Emergency Service Boundary

Public Safety Answering Points (PSAP) Boundary

Layer Status

- The information is included in the CAD data, but will be modified for the State of WI standard and in preparation for NG 911.

- **PSAP Boundary:** Same as County Boundary

Custodian

- GIS Staff & Langlade County Sheriff's Office

Maintenance

- GIS Staff

Standards

- Wisconsin GIS NG9-1-1 Data Standard for PSAP Boundary

Provisioning Boundary

Layer Status

- The Provisioning Boundary is not the same as the PSAP Boundary as of November 2021. There is a Township in Forest County called Nashville which is partly included where Dispatch takes 911 calls. Not all services are dispatched to Nashville.

Custodian

- GIS Staff & Langlade County Sheriff's Office

Maintenance

- GIS Staff

Standards

- Adopt Wisconsin GIS NG9-1-1 Data Standard for Provisioning Boundary

Other Public Safety

e.g., Healthcare Facilities

Layer Status

- The DNR using elevation data working in conjunction with Land Records staff to create a Post Lake Flood Shadow Dam Break Analysis.

Custodian

- DNR, County

Maintenance

- As Needed

Standards

- None.

Lake Districts

Layer Status

- Within Langlade County there are several lake districts. The Lake District codes are included in the complete tax parcel database and the presumption is that those parcels bordering those bodies of water are included in those Districts. The following are listed for the 2025-27 Land Conservation Lake Districts. Antigo, Greater Bass, Enterprise, Mary, Post, Rolling Stone and Pickerel-Crane.

Custodian

- Langlade County Land Records & Conservation is aware of these but each Township is the creator of those Districts and has a County Board member associated with them.

Maintenance

- There is no GIS layer and it would require some modification to the Catalis/LandNav Database to construct a meaningful map with the correct information.

Standards

- N/A

Native American/Tribal Lands

Layer Status

- There are two small Native American burial sites in the County. They are shown on the County GIS as a tax parcel or are included on a CSM. There may be more. They will be mapped as needed when discovered.

Custodian

- Land Records Department

Maintenance

- Land Records Department

Standards

- N/A

Other Administrative Districts

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

Layer Status

- The County owns and manages approximately 130,000 acres as County Forest Land. Those parcels are contained within the tax parcel records.

Custodian

- Langlade County Land Records & Regulations Department.

Maintenance

- Langlade County Forestry Department

Standards

- None.

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

- Langlade County has two layers. The DNR layer which we used as the base line for almost everything. In 2018 a Hydro Breakline layer was delivered as part of the LIDAR data, at this time it is merely reference. There has been no other work done for some kind of value-added hydrography.

Custodian

- Langlade County Land Records & Regulations Department

Maintenance

- As Needed.

Standards

- None.
- USGS Elevation-Derived Hydrography Specifications

Cell Phone Towers

Layer Status

- No GIS Layer exists. The address locations of the towers are known at the 911 Dispatch Center.

Bridges and Culverts

Layer Status

- The county does not an internal digital Bridges or Culverts Layer. There would potentially be some interest from the county highway department in culverts to help with a statewide culvert initiative, some of which has been produced at the WI DOT.

Non-Metallic Mining

Layer Status

- Quarry layer for the non-metallic mining sites.

Custodian

- Land Records & Regulations Department

Maintenance

- GIS Staff, Land Records & Regulations Department. Updated at least annually.

Standards

- None

Railroads

Layer Status

- There are no active railroads remaining in Langlade County.

Manure Storage Facilities

Layer Status

- This information is in an Access Database, not yet a GIS Layer. Plans are to expand those site visits and incorporate a GIS layer.

Custodian

- Land Conservation

Maintenance

- Land Conservation

Standards

- None

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.

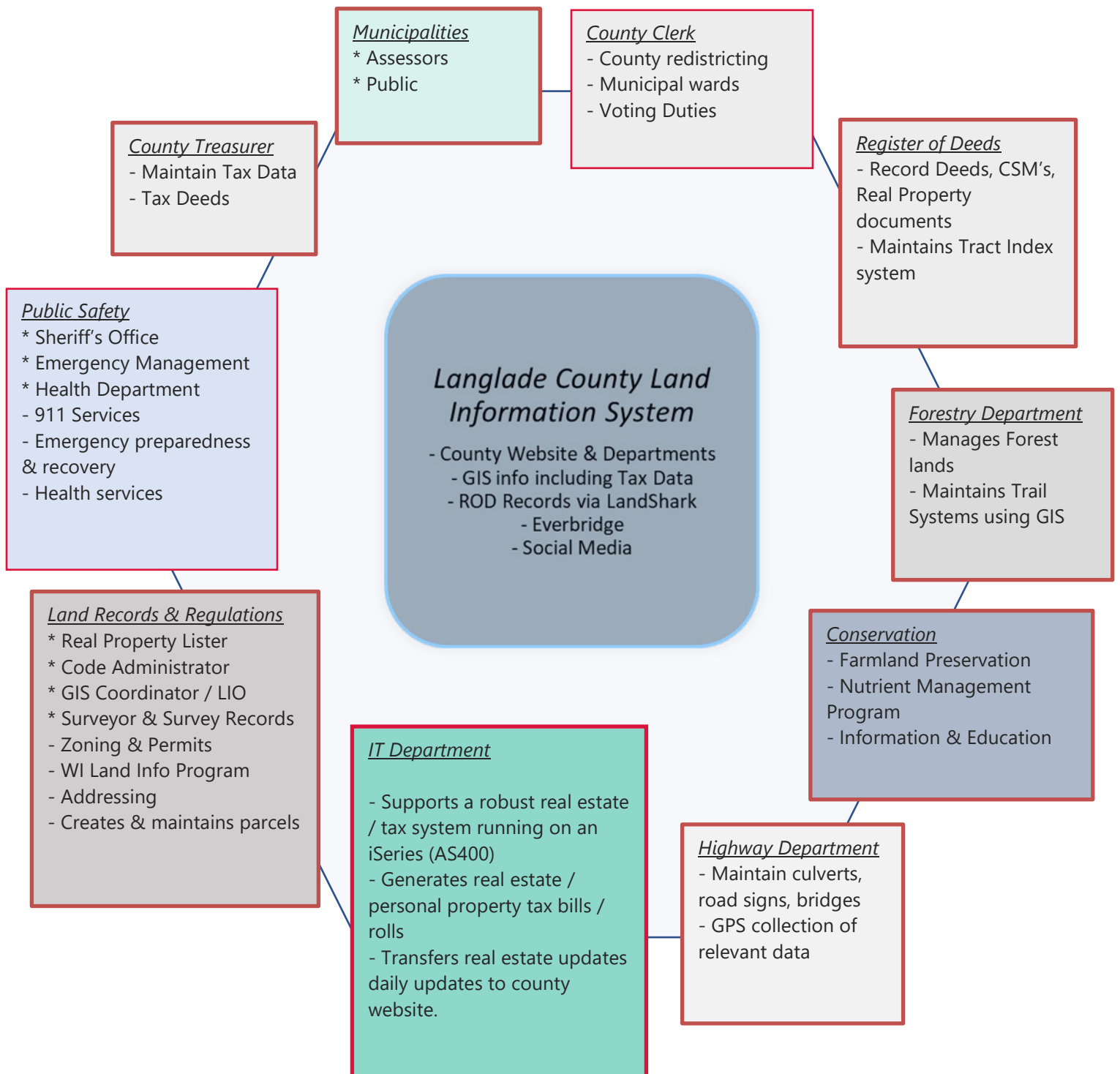
One integration requirement is listed under s. 16.967(7)(a)(1), Wis. Stats., which states that counties may apply for grants for:

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.

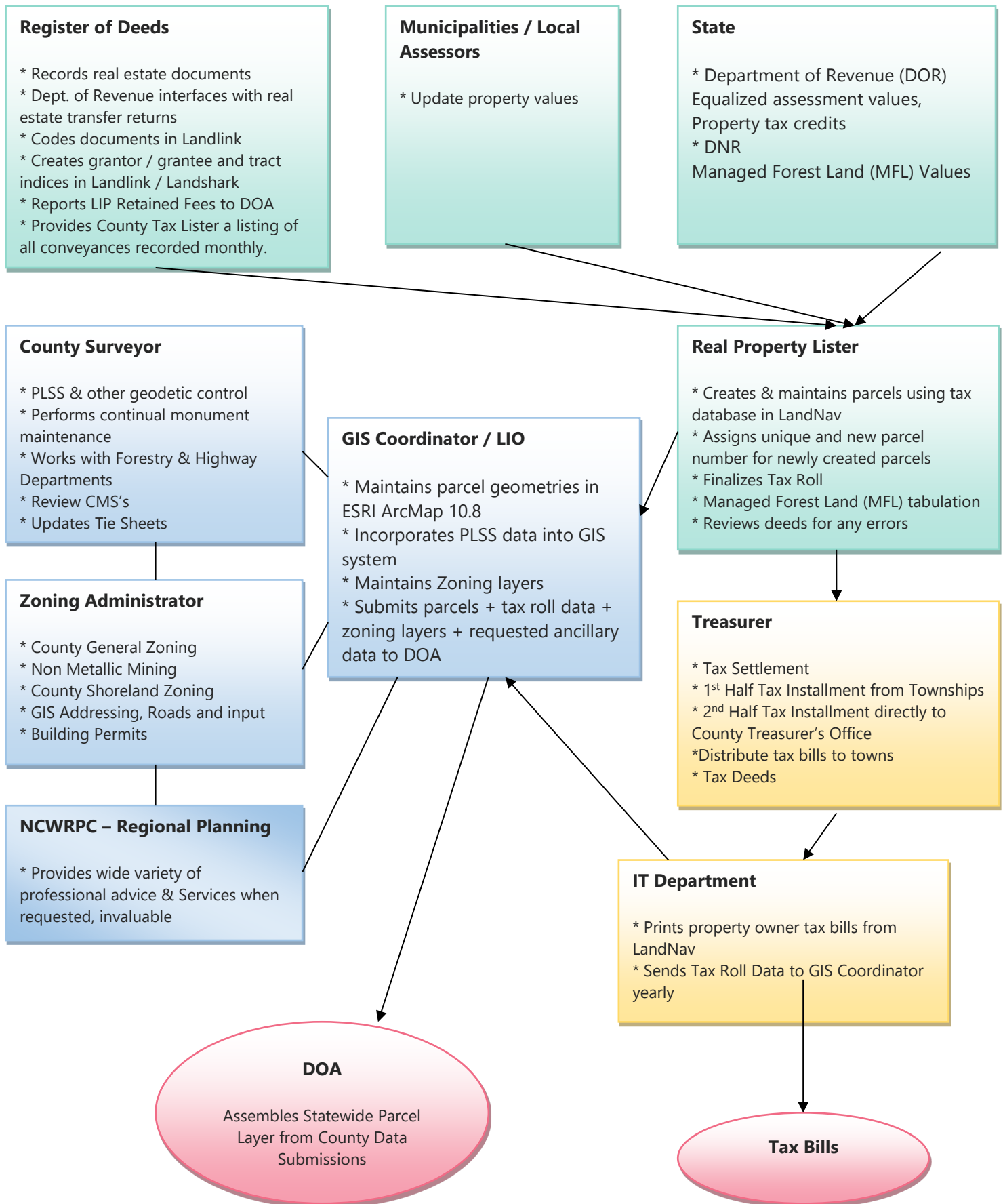
This chapter describes the design of the county land information system, with focus on how data related to land features and data describing land rights are integrated and made publicly available.

Current Land Information System

Diagram of County 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

- Countywide network with multiple drives and backups
- Land Records Plotter: HP XL3600
- GIS Work Station HP Z840

Software

- Tax Records – The Real Property Listing, Tax applications System and permit systems all run on Catalis/LandNav . The Land Records and Regulations Dept. works closely with the IS staff, Treasurer and Register of deeds to provide accurate data to the best of our ability.
- GIS Software - ESRI One Advanced License, 2 Basic Licenses. Those licenses are used to maintain tax parcel mapping and a wide variety of other data which the county uses. The county maintains this software at a current level through the annual software agreement with ESRI. Blue Marble's Global Mapper has been acquired on recommendation from Ayres for use with LIDAR, Orthoimagery, and GIS.
- Public Access – We have a website hosted through Schneider Geospatial and participate in the collection of data for a Statewide Parcel layer. In addition some of the non parcel data is used for reference at the Robinson Map Library through an agreement of use policy. There are two PC's at the Land Records & Regulation desk which are used for viewing by staff and the public when dealing with the information in its various forms. A PC used only for the Map Index to look up survey records is also available during business hours.
- **County currently uses ArcGIS Pro:** Yes, we have been using Pro to accomplish GIS tasks.

Website Development/Hosting

- Langlade County hosts a website that provides links to much of our data. Schneider Geospatial/Beacon is used to display much of our parcel data. Catalis/LandNav is used for tax information, Trimin/Land Shark is used for Register of Deeds Information.

Metadata and Data Dictionary Practices

Metadata Creation

- **Metadata creation and maintenance process:** Basic metadata exists for many of the GIS layers with more extensive metadata for the most used layers such as Parcels, Zoning, PLSS & Addressing. We are using the FGDC standard in ESRI software. Since the last plan more development has taken place on the critical layers and more will be developed with less time demand for parcel work.

Metadata Software

- **Metadata software:**
 - 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:** All fields are manual entry. Description, Maintenance, Custodian, and Summary for the most basic data layers. Increased information and accuracy for the most requested geodatabase files.

Metadata Policy

- **Metadata Policy:** There is no strict Metadata policy in place, with the increased request for it from various agencies we are increasingly working on having at least minimal Metadata in place.

Municipal Data Integration Process

- Langlade County Land Records and Regulations Dept. (LR&RD) is the custodian for the countywide real property system and tax bill creation. The County works with the municipalities Assessors, Clerks and Treasurers in obtaining the assessment data from the

Assessor needed to create the assessment roll, tax roll and tax bills. The County is responsible for reviewing the deeds and updating the ownership data, ie owners name, mailing address, document, etc. The County advises the assessors on acreage changes as need. The City of Antigo contracts with a vendor (other than the Counties) to host their GIS site. Via arrangement, the County exports a custom set of tax data to the vendor for the City on a monthly basis.

- The County also maintains the county wide address and master street guide (MSAG) for the 911 system. With more advanced systems approaching the MSAG and Automatic Location Identification (ALI) database will likely be rebuilt using the best data possible. The County assigns new addresses while the townships do the parcel and road signage.
- The County has countywide Shoreline Zoning and Comprehensive zoning for all but three townships, the City of Antigo and Village of White Lake.
- The County has a strong cooperative working relationship with the municipalities where the County regularly assists them in correcting parcel issues such as ownership corrections, acreage corrections, mapping updates, MFL acreage resolutions etc.

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://beacon.schneidercorp.com/Application.aspx?App=LanladeCountyWI&PageType=Map	None	https://landnav.co.lanlade.wi.us/login/index/?ReturnUrl=%2F	https://landshark.co.lanlade.wi.us/LandShark/login

Single Landing Page/Portal for All Land Records Data

URL
https://beacon.schneidercorp.com/Application.aspx?App=LanladeCountyWI&PageType=Map

Web Services/REST End Points

URL
None

County Webpage with Link to Statewide Parcel Map (www.sco.wisc.edu/parcels/data)

URL
https://www.co.lanlade.wi.us/departments/land-records-and-regulations/gis/maps-and-apps/#Statewide%20Parcels

Municipal Website Information

Municipal Website	Municipal Website URL
City of Antigo GIS Web Map	https://antigo.ags.ruekert-mielke.com/
Village of White Lake	https://villageofwhitelake.com/

Data Sharing

Data Availability to Public

Data Sharing Policy

- Langlade County will provide all GIS, tax parcel data to non-profits or educational entities for free and to others at minimal rates
- Langlade County sells tax parcel data. Minimum charge \$60/hr, over 1 hour charged in 15-minute increments at the same hourly rate. Postage is extra if mailed.
- Some of these datasets are also openly published on the Wisconsin State Cartographer's Office website as a requirement of participating in the Wisconsin Land Information Program.

Open Records Compliance

- Langlade County adheres to the Wisconsin Open Records Law for access to land records.
- Customized data requests are handled through our IS and the Land Records and Regulations Dept.

Data Sharing Restrictions and Government-to-Government Data Sharing

Data Sharing Restrictions

- Documents Recorded with the Register of Deeds (ROD) are available at the statutory fees prescribed by WI State Statute 59.43(2) which sets copies at \$2.00 for the first page and \$1.00 for each additional page. Copies purchased from the ROD are for single use only and further sale or distribution is prohibited.
- The use of the Schneider Geospatial Beacon Langlade County GIS Mapping website requires acceptance of a Langlade County WI Disclaimer.

Government-to-Government Data Sharing

- Langlade County will usually provide data free if the county will be getting something in return. Langlade County has provided data to other governmental agencies at no cost and without the requirement to provide something in return. The County has no formal policy on this.

Training and Education

- County staff regularly attends conferences, workshops and/or training sessions sponsored by the following: Wisconsin Land Information Association (WLIA); ESRI User Group (UWUG); Real Proper Lister Association; Register of Deeds Association, Treasurers Association; Wisconsin County Code Administrators, along with online training as needed for software such as ArcView, Carlson Survey, TraversePC and MicroSurvey. Langlade County GIS/mapping/surveying/LIO staff will continue to use the WLIP training and education grant for land records staff development.
- In the past, various Land Records staff has appeared on a local morning radio talk show to inform the public of new features, coverage etc on GIS system. Walk-in public is also educated on tools within the GIS system as needed or as requested.
- There have been education efforts to teach local Realtors of the various features available on the GIS website. This includes training at a local bank during a Board of Realtors session, individual visits to offices, and materials created specifically geared to that industry.

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.

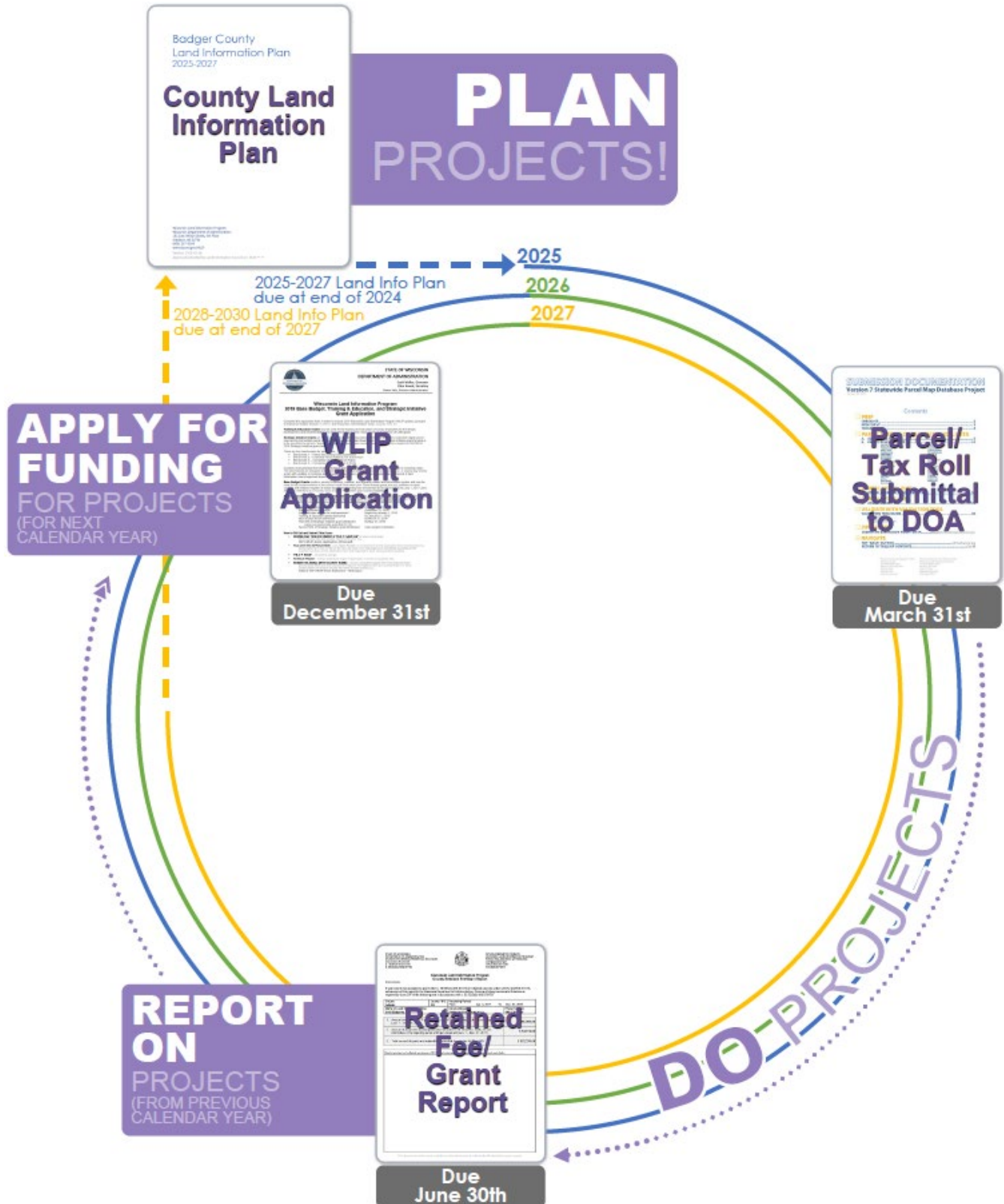


Figure 1. The WLIP Land Information Plan/Grant Project Cycle

Project Plan to Maintain Searchable Format (Benchmarks 1 & 2)

Project Title: Project Plan to Maintain Searchable Format (Benchmarks 1 & 2)

Project Description

How Searchable Format Will Be Maintained

- The searchable format is maintained through the use of tools provided by the state and the staff at the county. The IS / IT staff sends tax data out of their system to the GIS coordinator upon request. At that time the parcel data is combined with the tax data and the necessary modifications necessary for the current version of the Statewide Data Layer. The process is not automated and takes about 35 hours to complete at this time. A more automated process could be accomplished through the use of outside vendors and / or further investigation and is included here for that reason.

Business Drivers

- The Project Plan to Maintain Searchable Format for Benchmarks 1 & 2 is a requirement for those counties who utilize Strategic Initiative funds for parcel/tax roll formatting to prepare the data submission to DOA.

Objectives/Measure of Success

- We have met the Searchable Format for our Statewide Submissions and plan to continue to meeting the Searchable Format for Benchmarks 1 & 2 (Parcel and Zoning Data Submission, Extended Parcel Attribute Set Submission).

Project Timeframes

Timeline – Project Yearly Plan to Maintain Searchable		
Milestone	Duration	Date
Project start	–	January 1
Gather data	1 month	January 1-30
GIS Coordinator combines data	1 month	February 1-28
Project complete	–	March 1

-

Responsible Parties

- GIS Coordinator for parcel data in Land Records Department.
- Outside contractor

Estimated Budget Information

- County will receive quotes from vendors if further programming becomes mandatory. If that is the case, this figure is an estimate of automation. - \$10,000
- See table at the end of this chapter.

Project Plan for Parcel Completion (Benchmark 3)

Project Title: Project Plan for Parcel Completion (Benchmark 3)

Project Description

Current status of parcel data

- **Current status of parcel data:** Maintenance Mode. See [Parcel Layer Status](#) in Chapter 2.
- **Tally of the total number of parcels in digital format:** 29,409
- **Estimated number of parcels yet to be digitized:** 0

Business Drivers

- **

Objectives/Measure of Success

- **The objective is to meet Benchmark 3 (Completion of County Parcel Fabric) by:** Complete.
- **Number of parcels to be added for the planning period (2025-2027):** 0

Project Timeframes

- Complete

Responsible Parties

- County GIS Staff
- Outside Contractor

Estimated Budget Information

- See table at the end of this chapter.

Project Plan for PLSS (Benchmark 4)

Project Title: Project Plan for PLSS (Benchmark 4)

Project Description

Current status

- See [PLSS Layer Status table](#) in Chapter 2.

Planned approach

- We are working towards “Completion” of PLSS corners and tie sheets online through the Regional Planning Office and / or Survey Control Finder. The plan is to work on township boundaries as some of the earlier mapped townships were done with sometimes approximate PLSS locations and now the newer mapped, adjoining townships don’t match at the edges. Additionally, in 2019, a major storm came through some of the county potentially damaging or even destroying monumentation in the affected area.
- In 2021 our County Surveyor retired. Between 2016 and 2021 an increase of more than 1000 PLSS additional corners were made digitally available.
- Langlede County has a “maintenance program payment” to help with corner disturbances when work is being done by land surveyors. The payment schedule for this “maintenance program payment” was updated in 2023 to encourage this to be done more frequently when needed.

Missing Corner Notes

- **Documentation for any missing corner data:** Some will be derived from Survey Data. Our county may never get data on some of the missing corners set on the larger blocks of land or those in remote areas. Examples of those blocks include certain spots in the township of Ackley, Langlede County owned land, and parts of the Chequamegon-Nicolet National Forest

County Boundary Collaboration

- See PLSS Layer Status table in Chapter 2. Langlede County works with neighboring counties to eliminate duplication of efforts.

Business Drivers

- Completion and integration of PLSS will improve the geospatial accuracy of the parcel layer and other county land information system layers.

Objectives/Measure of Success

- **The objective is to meet Benchmark 4 (Completion and Integration of PLSS) by:** 2028 or later.
- **Number of corners to be remonumented and/or rediscovered by 2027:** 45 (This will complete our project of common township boundaries in Langlede County.)
- **Number to have new coordinates established by 2027:** 45
- **Accuracy class for these new coordinates by 2027:** Survey Grade.
- **Number of new corner coordinates to be integrated into the parcel fabric by 2027:** All that will be monumented.
- **Number of new tie sheets to be posted online by 2027:** 45. All that are completed by 2027.

Project Timeframes

- As the County Boundary PLSS project has been completed, others will be done according to priority and availability of Contractor(s). Works in progress within the next two years. Maintenance work on new or improved roadways and investigating the damage done to the corners during the 2019 storm. The County Surveyor of the past 29 years retired in 2021, Langlede County has hired outside Contractors to complete some of the work.
- Further progress will be delayed until our 2025 Orthoimagery project is completed, with remaining funds earmarked to fund PLSS work. With future funding levels unknown the county can’t determine a completion date for this project.

Responsible Parties

- Langlede County Land Records & Regulations Department

Estimated Budget Information

- See table at the end of this chapter (for budget information for the planning period 2025-2027).
- **Estimated remaining cost for completion and integration of PLSS (to reach maintenance mode)**
 - **Estimated approximate average cost of remonumentation per corner:** \$600

- **Total cost of remaining remonumentation:** \$27,000
- **Total cost of remaining integration of PLSS points into parcel layer:** \$0 equipment staff time only.
- **Cost of anything else remaining:** \$10,000 contracted professional services (Regional Planning)
- **Total remaining cost:** \$37,000

Project #1: ROD Public Access System Support

Project Description

- Help maintain Landshark public access system
- **Land Info Spending Category:** Website Development / Hosting Services

Business Drivers

- Land Information System for access and retrieval of recorded documents.
- Register of Deeds.

Objectives/Measure of Success

- Electronic tract index of recorded documents available to the public.

Project Timeframes

Timeline – Project #1 ROD Public Access System Support		
Milestone	Duration	Date
Project #1 start	–	January 1, 2025
Project complete	–	Dec 31, 2027

Responsible Parties

- Register of Deeds
- Vendor (TriMin/Landshark Anticipated)

Estimated Budget Information

- Annual Maintenance is offset by retained fees, but increases yearly. Expected estimated yearly range from this project is \$10,000-\$11,500.
- See table at the end of this chapter.

Project #2: Document Imaging Improvements

Project Description

- Various documentation such as tax rolls and deeds could potentially be scanned from past years giving more access to these items in a digital manner. Either upgrade to existing systems or new.
- **Land Info Spending Category:** Hardware, Software

Business Drivers

- Increased access to documents improving decision-making & reducing the need for staff time to provide information to the general public.
- Land Records & Regulations
- Register of Deeds
- Treasurer’s Office
- County Clerk

Objectives/Measure of Success

- Future time savings in fulfilling records requests.
- Maximize the value of imagery services provided.

Project Timeframes

Timeline – Project #2 Document Imaging Improvements		
Milestone	Duration	Date
Project #1 start	–	January 1, 2025
Project complete	–	Dec 31, 2027

Responsible Parties

- Land Records & Regulations Department
- Information Technology Department
- Register of Deeds
- Treasurer’s Office

Estimated Budget Information

- \$12,500
- See table at the end of this chapter.

Project #3: Survey Resource Support

Project Description

- The county will use licensed and credentialed outside contractors to perform PLSS maintenance. Also, the potential to empower other county employees with the ability to potentially collect and edit GPS/GIS data (NON PLSS) used for layers.
- **Land Info Spending Category:** Software, Hardware, PLSS, Parcels, Administrative Activities & Management

Business Drivers

- The County has individuals across multiple departments who are responsible for inspections and visits to locations who do not currently collect GIS related information on these trips. Examples include POWTS, culverts, invasive species areas, quarries, signs, trails, and so forth. The need for accuracy for the PLSS corners and work on Benchmark 4. The datum change nationwide from NAD(83) to NATRF 2022 will require software and hardware upgrades along with training and data transformation. WI is one of the few states with individual County Coordinate Systems, preliminary information from our WI State Cartographers Office and others suggests this will no longer be the case.
- Land Records & Regulations Department

Objectives/Measure of Success

- Ideally, data collection would expand beyond a limited handful of people.
- The enhancement and accuracy of anchor points tying the parcel data to the PLSS
- There are always new systems being developed for accuracy and use

Project Timeframes

- Consultants will have to fill in until such time as a course of action is set regarding a County Surveyor. Most counties have multiple needs even with a County Surveyor.
- 2025-2027 potential new Survey equipment needs

Responsible Parties

- Highway Department
- Health Department
- Conservation
- Forestry
- Land Records & Regulations

Estimated Budget Information

- \$10,000 Updated Equipment
- See table at the end of this chapter.

Project #4: Imagery Maintenance Project

Project Description

- Keep the cycle of imagery types such as the WROC Program and potentially LIDAR to be maintained or improved upon. With more funds anticipated to be directed towards Benchmark 4 and PLSS corner work the length of time for using various funding sources is likely to stretch out.
- **Land Info Spending Category:** Orthoimagery, Land Use

Business Drivers

- Preparedness for larger Imagery Projects
- County land information system PLSS once ramped up needs to be maintained. It is not a stop stutter sort of task. Therefore, with the bulk of Strategic Initiative funds diverted to Benchmark 4 until completion, a plan would be advisable to gather those funds needed for WROC and or LIDAR down the road.
- Land Records & Regulations Department
- Land Conservation Department
- Forestry, Parks, & Recreation Department

Objectives/Measure of Success

- Participation in WROC and potential rounds of 3DEP type funding sources.

Project Timeframes

- 2025 Flight
- 2026 Imagery available

Responsible Parties

- Land Records & Regulations Department
- Outside Contractor

Estimated Budget Information

- \$25,000/year average.
- See table at the end of this chapter.

Project #5: Improved Access to Land Records

Project Description

- Allow for the expanded use of GIS files and other data created online. AS400, ArcGIS Online, and various scripting to automate new solutions. Plan for improvement of current and future benchmarks relating to statewide initiatives. The goal of doing all of this is to expand the use of the data by the public, business, and education sectors. The value of data increases with the number of users and things done with that data. Another set of very useful information to be made available online would be soil, sanitary, and zoning permits. The goal is to provide business drivers.
- **Land Info Spending Category:** Website development / Hosting Services, Digital Parcel Mapping, PLSS, LIDAR, Orthoimagery, Education

Business Drivers

- Public, Business, Scientific, and Educational opportunities. Plumbers, Builders
- Land Records & Regulations Department

Objectives/Measure of Success

- Provide more transparency to public information. Allow more efficient delivery of information at hours not normally available in the past. As data becomes used by a broader audience its value increases. The ability for Plumbers or other construction business activities to gain access to this data would be beneficial

Project Timeframes

- Investigation into options and investment likely over the 2025-2027 years

Responsible Parties

- Land Records & Regulations Department
- Register of Deeds Office
- Information/Technology Department
- Forestry, Parks, & Recreation Department

Estimated Budget Information

- \$5,000 annually
- See table at the end of this chapter.

Project #6: Emergency Government Support

Project Description/Goal

- Computer Aided Dispatch (CAD) through 911 vendor and with upcoming NextGen 911 requires the use of very specific GIS datasets. While we have some of them implemented they need tweaking to meet the specific needs of the vendor or NG911.
- New layers might be created or other options investigated for Hydrants, High Cap Wells, Gas Pipelines, Hazmat Site Locations, Emergency Response Zones, Enhances Address data, Evacuation Routes, Medivac Landing Sites, Flood Zones, Recreational Trail system information such as intersection markers, and so forth.

Land Info Spending Category: Other Parcel Work, Street Centerlines, Address Points

Business Drivers

- Public Safety, Emergency Management, Sheriff's Office

Objectives/Measure of Success

- Provide the best quality data we can to help produce the best quality product for effective dispatch. In addition conformity to future NG911 standards will be required in some capacity. Public safety and tourist safety would certainly be improved by improved trail routes and identification.

Project Timeframes

- 2025-2027

Responsible Parties

- Sheriff's Office
- Forestry, Parks & Recreation Department
- Land Records & Regulation Department.

Estimated Budget Information

- \$12,500 annually
- See table at the end of this chapter.

Project #7: GIS Software Support

Project Description/Goal

- There are some expenses with software maintenance or platforms. ESRI and Global Mapper for day to day GIS operations as well as Carlson for Surveying. The AS 400 system will not remain forever. Some counties are converting over to one of two main companies. One being GCS, another called Transcendent. The goal here would be to support public access of information through a vendor package be it a module or module(s).

Land Info Spending Category: Software

Business Drivers

- Better integration of county systems with GIS data import and export for wider use of information.
- Combine the various ESRI products into a GIS Suite vs using one product.
- Keep LIDAR available to the public is LIDAR Online through Ayres.

Objectives/Measure of Success

- ArcGIS Pro and ArcGIS Online will begin to be used creating Apps and a more cohesive GIS System.
- Increased productivity.

Project Timeframes

- 2025-2027

Responsible Parties

- Land Records & Regulations Department
- Forestry, Parks & Recreation Department
- Land Conservation Department

Estimated Budget Information

- \$7,500 yearly, See table at the end of this chapter.

Project #8: Land Records Modernization: Data Migration

Project Description/Goal

- In 2023, Langlade County migrated our real estate data out of AS 400 and into Catalis. In early 2025, we hope to achieve the same with all of our permitting/land use data. This will involve the use of an outside contractor. As with Project 7, the goal is to would be to support public access of information.

Land Info Spending Category: Software

Business Drivers

- Better integration of land use/permitting data with real estate & GIS data.

Objectives/Measure of Success

- Increased productivity.

Project Timeframes

- 2025

Responsible Parties

- Land Records & Regulations Department
- Land Conservation Department
- IT Department

Estimated Budget Information

- \$5,000 one-time fee, See table at the end of this chapter.

On-going Costs Not Associated with a Specific Project: Full Time GIS Position

Project Description/Goal

- Continue expenditure for GIS Coordinator position, this is the only full time GIS Position in the county.
- **Land Info Spending Category:** Parcel Mapping, PLSS, Imagery Use, Address Points, Street Centerlines, every category works itself into this description.

Business Drivers

- Public access through use of up to date GIS information hosted on ADC.
- Conservation gains access to a GIS person, custom maps, and applications.
- Sherriff needs highly detailed GIS cleanup with Computer Aided Dispatch (CAD) vendor and NG911 is forthcoming.
- Clerk Redistricting with new Census information
- Health Department – COVID Dashboard & systems reporting
- Broadband Task Force – helping expand broadband services in county
- Real Estate Related: Assessment Purposes, Real Estate Professionals, Titles Companies.
- Nearly every department in the county benefits directly, certainly indirectly.

Objectives/Measure of Success

- GIS maintenance needs on a continuous basis along with LIO Duties
- A new set of Flood Plain Maps by 2024, current version is from the 1970's
- County needs are best addressed by having an in-house position vs. contracting for every individual need.

Project Timeframes

- Continuous until partially or fully funded from General County funding

Responsible Parties

- Land Records & Regulations Department

Estimated Budget Information

- See table at the end of this chapter.

Estimated Budget Information (All Projects) for Planning Period 2025-2027

Estimated Budget Information

Project Title	Item	Unit Cost/Cost	Land Info Plan	Project Total
			Citations Page # or section ref.	
Benchmark 1 & 2 Maintenance	Parcel & Zoning Searchable Format		Page 34	10,000
Benchmark 3 Maintenance	100% Parcel Layer		Page 35	15,000
Benchmark 4 Maintenance	PLSS	\$600+ Per Corner GPS Coordinates Bounty Program PLSS Groundwork Costs TBD	Page 36	\$37,000
1) ROD Public Access System Support	TriMin Maintenance	\$10,000-11,500/year Price given as range	Page 38	30,000-34,500
2) Document Imaging Improvements	Record Scanning Hardware & Software	Combined Line Item	Page 38	12,500
3) Survey Resource Support	GPS Hardware & Software	Combined Line Item	Page 39	10,000
				-
4) Imagery Maintenance Project	Imagery Projects	\$25,000/year	Page 40	75,000
5) Improved Access to Land Records	Website Development projects for Open Data	Unknown, entered as \$5,000/year	Page 40	15,000
6) Emergency Government Support	GIS Staff Support	\$7,500/year	Page 41	22,500
	Hardware & Software	\$5,000/year	Page 41	15,000
7) GIS Software Support	Software	\$7,500/year	Page 42	22,500
8) Land Records Modernization: Data Migration	Software	\$5,000	Page 42	5,000
Ongoing Costs not associated with a specific project	GIS Staff Position Wages & Benefits	\$67,500/year	Page 43	202,500
GRAND TOTAL				476,500

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

