

# Winnebago County Land Information Plan 2019-2021



\*\*Wisconsin Land Information Program  
Wisconsin Department of Administration  
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[www.doa.wi.gov/WLIP](http://www.doa.wi.gov/WLIP)

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# EXECUTIVE SUMMARY

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**About this Document.** This document is a land information plan for Winnebago County prepared by the land information officer (LIO) and the Winnebago 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 2018, Winnebago County was awarded \$51,000 in WLIP grants and retained a total of \$210,128 in 2017 from 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 Winnebago 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 Winnebago 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, Winnebago County’s Land Information Office strives to provide efficient and high-quality services to its residents and county departments by maintaining land records in an efficient manner, adopting standards to streamline the use of GIS data across departments, and provide services such as a more user-friendly webmapping service.

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

| Badger County Land Information Projects: 2019-2021 |   |
|--|---|
| Project #1   | Indexing of documents by geography in GIS                           |
| Project #2   | Countywide integration of tax/assessment data with parcel polygons  |
| Project #3   | Expansion of the use of mobile GPS/GIS technology                   |
| Project #4   | Document imaging improvements                                       |
| Project #5   | Website development and hosting for improved access to land records |

The remainder of this document provides more details on Winnebago 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 2016-2018 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 Winnebago County is meeting these benchmarks appears in the Foundational Elements section of this plan document.

## **County Land Information System History and Context**

Winnebago County began using GIS technology in the early 1980s, demonstrating success with projects such as the modernization of tax parcel mapping. Seeing a critical need for a modern land records system, the county created the Land Records Council (LRC) in 1989. The LRC was later expanded to include representatives from each of the county's 21 municipalities, with Winnebago County as the lead agency. One year after its formation, the LRC presented a project plan to modernize the county's land records, using geographic information system technology. This project became known by the acronym "WINGS".

As the project team for WINGS, the LRC has fostered constant, open communication that has created a spirit of cooperation and commitment. This environment has facilitated consensus on technical project issues such as database design, hardware and software, and data conversion and maintenance.

A comprehensive, countywide needs assessment laid the foundation for the WINGS project implementation plan. The team, working with UGC Consulting, interviewed various user groups to understand how they would be impacted by the new technology. The study identified specific requirements users would have for the new system, the database features and map accuracies they required as well as the applications they expected from the GIS. It also defined 31 data elements that both public and private entities would need to build a common base map. From this study, they developed an implementation plan, including a cost analysis, to deliver the GIS capabilities each community needed to handle existing operations and future growth.

The Winnebago County Board fully supported the plan and approved a \$2.6 million dollar bond issue to cover its share of the project costs. The LRC then began the task of identifying the technical and management issues of implementing WINGS.

The implementation plan called for installing a core system over a three-year period with completion by the fourth quarter of 1993. This phased approach has enabled the team to parallel system implementation with the conversion of the paper records to a digital format. It has also ensured that the data each user group needs has been available before hardware and software have been purchased. In addition it has helped the team effectively manage system development and provide individual user training as each phase has been completed.

The WINGS project demonstrates how local government agencies have shared resources to make their vision of a common landbase a reality, on schedule and within budget. WINGS also gives them the connectivity to bridge the "islands of information" that have existed in public agencies throughout the county. Through cooperation, the communities of Winnebago County are able to provide better service while saving taxpayer dollars.

## **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 2019-2021 plan, completed at the end of 2018, is the second post-Act 20 required update.

### **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 Winnebago County Land Information Council, and others as listed below.

| Winnebago County Land Information Council and Plan Workgroup |  |   |                                  |              |
|--|--|---|----------------------------------|--------------|
| Name   | Title  | Affiliation   | Email                            | Phone        |
| + Jerry Bougie   | Director of Planning, Zoning & GIS, Land Information Officer | Winnebago County Planning, Zoning & GIS Dept.       | jbougie@co.winnebago.wi.us       | 920-232-3340 |
| + Natalie Strohmeyer   | Register of Deeds  | Winnebago County Register of Deeds                  | ROD@co.winnebago.wi.us           | 920-232-3390 |
| + Mary Krueger   | County Treasurer   | Winnebago County Treasurer's Office                 | treasurer@co.winnebago.wi.us     | 920-232-3420 |
| + Liz Nichols  | Real Property Lister   | Winnebago County Real Property Lister's Office      | lnichols@co.winnebago.wi.us      | 920-232-3346 |
| + Robert Keller  | County Board Member  | Winnebago County Board                              | Robert.Keller@co.winnebago.wi.us | 920-379-0717 |
| + Paul Schmidt   | Realtor  | Coldwell Banker                                     | pschmidt@coldwellhomes.com       | 920-651-4104 |
| + Linda Kollmann   | Director of Emergency Management                             | Winnebago County Emergency Management               | lkollmann@co.winnebago.wi.us     | 920-236-7463 |
| + Jim Smith  | Registered Land Surveyor                                     | Martenson & Eisele, Inc.                            | jims@martenson-eisele.com        | 920-685-6240 |
| + Mike Zuege   | GIS Coordinator/Public Member                                | East Central Wisconsin Regional Planning Commission | mzuege@ecwrpc.org                | 920-886-6815 |
| Diane Culver   | GIS Specialist II  | Winnebago County GIS                                | dculver@co.winnebago.wi.us       | 920-232-3335 |
| Dave Levine  | GIS Specialist   | Winnebago County GIS                                | dlevine@co.winnebago.wi.us       | 920-232-3334 |
| Andy Maracini  | GIS Specialist   | Winnebago County LWCD                               | amaracini@co.winnebago.wi.us     | 920-232-1956 |
| Dean Kaderabek   | GIS Systems Analyst/Administrator                            | Winnebago County GIS                                | dkaderabek@co.winnebago.wi.us    | 920-232-3336 |

+ Land Information Council Members designated by the plus symbol

# 2 FOUNDATIONAL ELEMENTS

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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

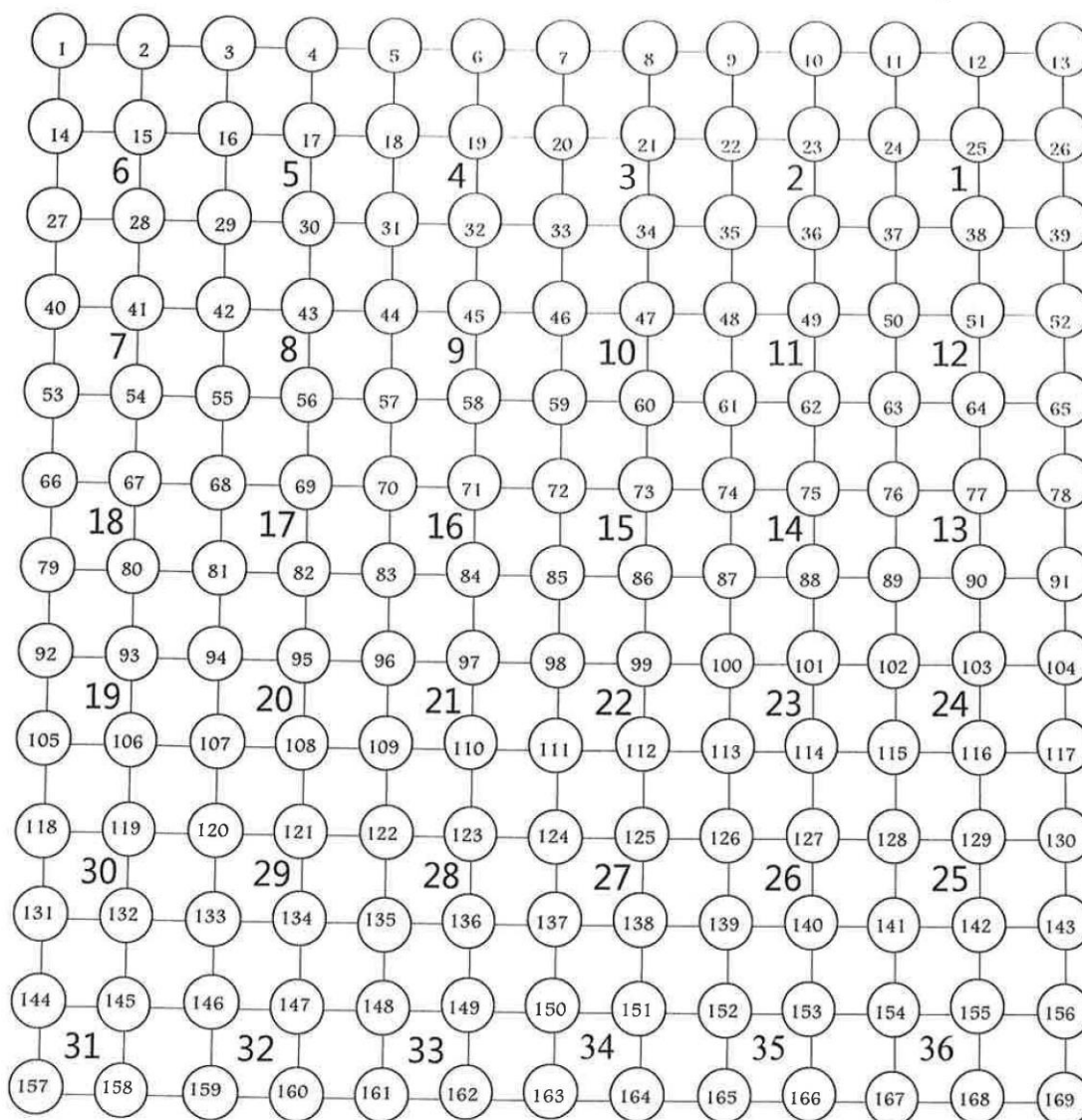
#### PLSS Layer Status

|  | Status/Comments  |   |  |
|--|--|---|--|
| Number of PLSS corners (selection, ¼, meander) <b>set in original government survey</b> that can be remonumented in your county  | <ul style="list-style-type: none"> <li>2,056 (28 are now inaccessible, under water)</li> </ul>   |   |  |
| Number and percent of PLSS corners capable of being remonumented in your county that <b>have been remonumented</b>   | <ul style="list-style-type: none"> <li>2,056 (100%)</li> </ul>   |   |  |
| Number and percent of remonumented PLSS corners with survey grade coordinates (see below for definition) <ul style="list-style-type: none"> <li><b>SURVEY GRADE</b> – 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</li> <li><b>SUB-METER</b> – point precision of 1 meter or better</li> <li><b>APPROXIMATE</b> – point precision within 5 meters or coordinates derived from public records or other relevant information</li> </ul> | <ul style="list-style-type: none"> <li>2,044 (99.4%)</li> </ul>  |   |  |
| Number and percent of survey grade PLSS corners integrated into county digital parcel layer  | <ul style="list-style-type: none"> <li>2,084 (100%)</li> </ul>   |   |  |
| Number and percent of non-survey grade PLSS corners integrated into county digital parcel layer  | <ul style="list-style-type: none"> <li>71 (100%)</li> </ul>  |   |  |
| Tie sheets available online?   | <ul style="list-style-type: none"> <li>Yes.</li> <li>URL= <a href="https://wcgis3.co.winnebago.wi.us/gpsviewer">https://wcgis3.co.winnebago.wi.us/gpsviewer</a></li> </ul>   |   |  |
| Percentage of remonumented PLSS corners that have <b>tie sheets available online</b> (whether or not they have corresponding coordinate values)  | <ul style="list-style-type: none"> <li>100%</li> </ul>   |   |  |
| Percentage of remonumented PLSS corners that have tie sheets available online (whether or not they have corresponding coordinate values) <b>and a corresponding URL path/hyperlink value</b> in the PLSS geodatabase   | <ul style="list-style-type: none"> <li>100% (also all are saved as attachments in the database)</li> </ul>   |   |  |
| 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"> <li>0%</li> </ul>   |   |  |
| Approximate number of PLSS corners believed to be lost or obliterated  | <ul style="list-style-type: none"> <li>28 original corners are inaccessible or under water</li> </ul>  |   |  |
| Which system(s) for <b>corner point identification/numbering</b> 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"> <li>Winnebago County Government Land Corner Index (index numbering shown on next page)</li> </ul>   |   |  |
| Does the county contain any <b>non-PLSS areas</b> (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"> <li>No</li> </ul>   |   |  |
| Total number of PLSS corners along each bordering county   | <table> <tr> <td> <ul style="list-style-type: none"> <li>Calumet – 6</li> <li>Outagamie – 34</li> <li>Waupaca – 16</li> </ul> </td><td> <ul style="list-style-type: none"> <li>Waushara – 34</li> <li>Green Lake – 13</li> <li>Fond du Lac – 41</li> </ul> </td></tr> </table> | <ul style="list-style-type: none"> <li>Calumet – 6</li> <li>Outagamie – 34</li> <li>Waupaca – 16</li> </ul> | <ul style="list-style-type: none"> <li>Waushara – 34</li> <li>Green Lake – 13</li> <li>Fond du Lac – 41</li> </ul> |
| <ul style="list-style-type: none"> <li>Calumet – 6</li> <li>Outagamie – 34</li> <li>Waupaca – 16</li> </ul>  | <ul style="list-style-type: none"> <li>Waushara – 34</li> <li>Green Lake – 13</li> <li>Fond du Lac – 41</li> </ul>   |   |  |
| Number and percent of PLSS corners remonumented along each county boundary   | <ul style="list-style-type: none"> <li>100% for each county</li> </ul>   |   |  |
| Number and percent of remonumented PLSS corners along each county boundary with survey grade coordinates   | <ul style="list-style-type: none"> <li>100% for each county</li> </ul>   |   |  |
| In what ways does your county collaborate with or plan to collaborate with neighboring counties for PLSS updates on shared county borders?   | <ul style="list-style-type: none"> <li>All PLSS data is available publically via the County's GPS viewer website. Larger datasets are shared upon request.</li> </ul>  |   |  |



# WINNEBAGO COUNTY GOVERNMENT LAND CORNER INDEX

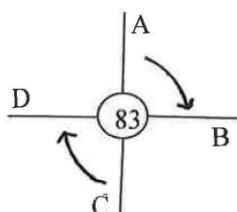
Town 19 North  
Range 16 East  
4<sup>th</sup> Principle Meridian



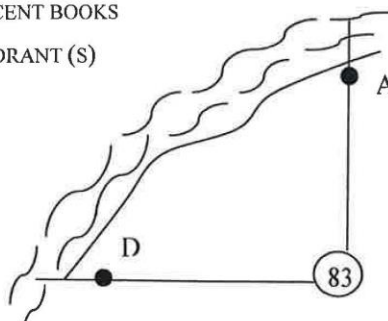
- CERTIFICATES FILED IN THIS BOOK



- CERTIFICATES FILED IN ADJACENT BOOKS  
AS INDICATED BY SOLID QUADRANT (S)



MEANDER CORNERS WILL BE IDENTIFIED  
ALPHABETICALLY CLOCKWISE AROUND  
THE ESTABLISHED SECTION CORNER



## Custodian

- Winnebago County GIS Department

## Maintenance

- Physical monuments are replaced by registered land surveyors as needed and available through the Winnebago County Planning and Zoning Department. Records such as new tie sheets submitted by surveyors are scanned and made available on the County's GPS viewer. Original hard copies are housed in the Planning and Zoning Department.

## 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
- Wisconsin County Surveyor's Association survey grade standard: Coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by s. 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision.

## Other Geodetic Control and Control Networks

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

### Layer Status

- Winnebago County does not maintain other geodetic control or control networks.

## Parcel Mapping

### Parcel Geometries

#### Layer Status

- **Progress toward completion/maintenance phase:** County-wide parcel layer is 100% complete. In Winnebago County, 100% of the county's parcels are available in a commonly-used digital GIS format.
- **Projection and coordinate system:** The current maintenance projection is NAD 1983 State Plane Wisconsin South 4803 US Feet. It is planned to be maintained in NAD 1983 HARN WISCRS Winnebago County Feet once data conversion is complete to ESRI software.
- **Integration of tax data with parcel polygons:** The County does not have a parcel polygon model that directly integrates tax/assessment data as parcel attributes. Winnebago County runs scheduled tasks that extract, transform and joins the assessment data to the parcel polygons.
- The county does have a parcel polygon model that directly integrates tax/assessment data as parcel attributes.
- **Esri Parcel Fabric/LGIM Data Model:** The County currently does not maintain the parcels using the Esri Parcel Fabric Data Model; however, Esri's Local Government Information Model is used to publish the layer.
- **Online Parcel Viewer Software/App and Vendor name:** Custom In-house developed and hosted Esri Web AppBuilder for ArcGIS – <https://wcgis3.co.winnebago.wi.us/parcelviewer>

- **Unique URL path for each parcel record:** Yes
  - Sample URL for tax parcel 022030604:  
<https://wcgis3.co.winnebago.wi.us/parcelviewer/?find=022030604>
  - Accessible information includes ownership, physical address, mailing address, short legal description, assessment classes and values, taxing districts, tax and payment history, parcel lineage and links to scanned tax bills.
  - This link is expected to be stable.
  - The unique URL launches an application with data shown for the selected parcel, but can't directly be used to export the parcel specific data. Winnebago County provides other options for obtaining tabular and geographic land records data.

#### Custodian

- The parcels for all 15 Towns, the Cities of Omro, Menasha and Neenah, as well as the Villages of Winneconne and Fox Crossing are maintained by the Winnebago County GIS Department. The Cities of Oshkosh and Appleton parcels are maintained by each respective municipality by GIS professionals as well.

#### Maintenance

- **Update Frequency/Cycle.** Parcel polygons are updated for county maintained tax records on a daily basis to reflect the "active" parcels in the County's Land Records System. Parcel polygons for the Cities of Neenah and Menasha are updated as assessment updates become available from designated personnel. Parcels datasets from the Cities of Oshkosh and Appleton are incorporated into the county-wide parcel dataset on an as-needed basis.

#### Standards

- **Data Dictionary:** A data dictionary is available for all attributes associates with the county-wide parcel dataset in human-readable form, with thorough definitions for each element/attribute name, and explanations of any county specific notations, particularly for parcel attributes listed by s.59.72(2)(a).

### Assessment/Tax Roll Data

#### Layer Status

- **Progress toward completion/maintenance phase:** NA (This is not applicable, since assessment/tax roll data is not a GIS data layer and is updated throughout the year.)
- **Tax Roll Software/App and Vendor name:** Ascent Land Records Suite – from contractor/vendor Transcendent Technologies
- **Municipal Notes:** Tax listing/tax roll information for the Cities of Appleton, Menasha, Neenah and Oshkosh are prepared by each respective municipality and submitted independently of Winnebago County to the DOR.

#### Custodian

- Real Property Lister

#### Maintenance

- **Maintenance of the Searchable Format standard:** To maintain the Searchable Format standard, the county pays an annual maintenance fee for a program that exports data from the tax listing software to the searchable format. The exported data is then joined to the parcel geometries and subjected to additional automated and manual validation and clean-up processes before being submitted to the Wisconsin Department of Administration.
- **Searchable Format Workflow:** If the searchable format would remain static from year to year, the program from our tax listing software coupled with implemented changes in how Winnebago County enters data, minimal human labor would be required to meet the annual parcel/tax roll submission requirements. Note: Significant human labor would be required on an annual basis to reformat data imported from the Cities of Menasha, Neenah and Oshkosh to exactly match the searchable format. The maintenance of this data and how it is entered and provided by those cities are outside of the county's control.

### 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

- Complete county-wide polygon feature which represents the easements within all recorded subdivision plats and certified survey maps (CSM)

### Custodian

- Winnebago County GIS

### Maintenance

- Maintained on an as-needed basis when new easements are recorded.

### Standards

- Winnebago County "WINGS" project.

## ROD Real Estate Document Indexing and Imaging

### Layer Status

- **Grantor/Grantee Index:** Currently, Grantor and Grantee information is indexed (on computer) for documents dating back to the mid 1950's. Additional information such as legal description & document date are also indexed. Indexing of older documents is in progress through "Crowdforce" data entry as the Register of Deeds budget allows.
- **Tract Index:** Recorded documents (Conveyances, Mortgages, Satisfactions, Lis Pendens, Assignments, Certified Survey Maps, Plats, etc.) are indexed by legal description and PIN (though PIN#'s are not required to appear on documents submitted for recording). The legal description is indexed as PLSS (i.e. Section, Town, Range, Quarter-Quarter unless property is located within a Subdivision Plat, Condominium Plat, Certified Survey Map, or Transportation Plat, in which case it is indexed by Plat/Map name or number followed by Lot/Block, Unit #, Lot #, or Parcel #. The City/Township/Municipality is also indexed as part of the legal description. Legal descriptions are indexed on computer back to about 1955.
- **Imaging:** Documents recorded with the Register of Deeds are digitally imaged (back to 1848). Additionally, Tract Books and Indices such as Grantor/Grantee, Corporations and Partnerships are fully imaged. If document is not fully indexed (pre-1955), image is still searchable via tract index and can be viewed by document number or volume/page.
- **ROD Software/App and Vendor Name:** Laredo/Tapestry – from contractor/vendor Fidar

### Custodian

- County Register of Deeds

### Maintenance

- The general rule is that the grantor-grantee (or party) index, tract index, and image are all available no later than the next working day after being recorded. There are occasional exceptions due to equipment failures.

### 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:** 2014

- **Accuracy:** Root mean square difference (RMSD) in the z direction of  $\leq 0.06$  meters
- **Post spacing:** Aggregate nominal pulse spacing (NPS) of  $\leq 0.70$  meters
- **Contractor's standard, etc.:** Data shall meet or exceed USGS Base Lidar Specifications V1.2 to satisfy specifications of 3-Dimensional Elevation Program (3DEP).
- **Next planned acquisition year:** There is not a specific update schedule for LiDAR data. The county will look to acquire an updated LiDAR dataset when the benefits of an updated surface outweigh the costs.

#### Custodian

- Winnebago County GIS

#### Maintenance

- There is little maintenance with LiDAR data. The data and its derivative products are made available in a variety of formats.

#### Standards

- Quality Level 2 (QL2) project specifications based on the U.S. Geological Survey National Geospatial Program Base Lidar Specification, Version 1.2. The data was developed based on a horizontal projection/datum of NAD83 (2011), Wisconsin Coordinate Reference System (WISCRS) Calumet, Fond du Lac, Outagamie and Winnebago Counties, US survey feet and vertical datum of NAVD88 (GEOID12B), US survey feet.

## LiDAR Derivatives

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

#### Layer Status

- The following products were produced and delivered with the 2014 LiDAR project:
  - Raw LiDAR point cloud data swaths in LAS 1.4 format
  - Classified LiDAR point cloud data, tiled, in LAS 1.4 format
  - Hydro-flattened breaklines in Esri shapefile format
  - 5-foot hydro-flattened bare earth raster DEMs, tiled, in ERDAS .IMG format
  - 5-foot intensity images, tiled, in GeoTIFF format
  - 2-foot contours, tiled, in Esri file geodatabase format
- All geospatial deliverables were produced in NAD83 (2011) Wisconsin Coordinate Reference System (WISCRS) Calumet, Fond du Lac, Outagamie and Winnebago Counties, US survey feet; NAVD88 (GEOID12B), US survey feet. All tiled deliverables have a tile size of 5,000 feet x 5,000 feet.

#### Custodian

- Winnebago County GIS

#### Maintenance

- There is little maintenance with LiDAR derivatives. The data and its derivative products are made available in a variety of formats.

#### Standards

- Project specifications are based on the U.S. Geological Survey National Geospatial Program Base Lidar Specification, Version 1.2.

## Other Types of Elevation Data

#### Layer Status

- Digital topographic contours that include 10 foot index and 2 foot intermediate contours based on DTM created in 1991.

#### Custodian

- Winnebago County GIS



## Maintenance

- This dataset is made available in a variety of formats, but is not actively maintained.

## Standards

- Aerometric Engineering, Inc. was contracted to triangulate and compile the topographic contours within Winnebago County for the WINGS Project.

# Orthoimagery

## Orthoimagery

### Layer Status

- **Most recent acquisition year:** 2015
- **Resolution:** 6" pixel resolution
- **Contractor's standard:** Spring acquisition leaf-off
- **Next planned acquisition year:** 2020. Winnebago County has historically compiled orthoimagery on a three year cycle but have shifted to a five year cycle to obtain the benefits from participating in the WROC Orthoimagery program. The future acquisition of orthoimagery will be in the spring of 2025.
- **WROC participation in 2020:** Unsure about participation – Evaluating other vendors.

### Custodian

- Winnebago County GIS

## Maintenance

- No maintenance activities planned.

## Standards

- Orthophotos were compiled to meet National Map Accuracy Standards for 1:1200 scale.

## Historic Orthoimagery

### Layer Status

- 2009; 1' pixel resolution; color; Ortho-rectified, compiled at 1:2400 scale
- 2005; 1' pixel resolution; color; Ortho-rectified, compiled at 1:2400 scale
- 2003 1' pixel resolution; color; Ortho-rectified, compiled at 1:2400 scale
- 2000; 1' pixel resolution; color; Ortho-rectified, compiled at 1:2400 scale
- 1997; 1' pixel resolution; black and white; Ortho-rectified, compiled at 1:2400 scale

### Custodian

- Winnebago County GIS

## Maintenance

- No maintenance activities planned.

## Standards

- National Map Accuracy Standards for 1:2400 scale.

## Other Types of Imagery

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

### Layer Status

- 2015 natural color 4-band (RGB-IR) imagery at 8 bits.
- 1991 Scanned aerial photo (9"x9") hardcopy prints; color; 150 DPI.
- 1981 Scanned aerial photo (9"x9") hardcopy prints; black and white; 150 DPI.
- 1978 Scanned aerial photo (9"x9") hardcopy prints; black and white; 150 DPI.
- 1977 Scanned aerial photo (9"x9") hardcopy prints; black and white; 150 DPI.
- 1976 Scanned aerial photo (9"x9") hardcopy prints; black and white; 150 DPI.
- 1975 Scanned aerial photo (9"x9") hardcopy prints; black and white; 150 DPI.

- 1971 Scanned aerial photo (9"x9") hardcopy prints; black and white; 150 DPI.
- 1957 Scanned aerial photo (9"x9") hardcopy prints; black and white; 150 DPI.
- 1950 Scanned aerial photo (9"x9") hardcopy prints; black and white; 150 DPI.
- 1941 Scanned aerial photo (9"x9") hardcopy prints; black and white; 150 DPI.

#### **Custodian**

- Winnebago County GIS

#### **Maintenance**

- The objective is to scan and geo-reference at least one set of historic imagery per year for all contact prints within our imagery library.

#### **Standards**

- None

## **Address Points and Street Centerlines**

### **Address Point Data**

#### **Layer Status**

- Address points for Winnebago County are complete.
- Address points are linked to the related tax parcel ID number and a related street centerline segment.
- All address points are shared with the E911 Dispatch Center, Planning & Zoning Department, Real Property Lister Office, Treasurer Office, Highway Department, County Health Department, Land & Water Conservation Department, all Municipal offices that use land records information related to address points, and the Winnebago County Parcel Profiler on the web.
- All address points are shared with the Wisconsin Government Accountability Board and are linked to the Statewide Voter Registration System (SVRS).
- All address points are provided to the U.S. Census Bureau.

#### **Custodian**

- Winnebago County GIS

#### **Maintenance**

- Winnebago County GIS maintains site address points daily.

#### **Standards**

- Address Point Data Standard & Winnebago County Uniform Addressing Code.
- All address points are in compliance with the U.S.P.S. standard.
- The ESRI Local Government Address Model was used but modified for our own business needs when compiling our address point data.

### **Building Footprints**

#### **Layer Status**

- Building footprints for Winnebago County are complete within Towns that are within County Zoning jurisdiction and were generated using copies of the foundation site maps and permits provided by the Winnebago County Zoning Office to the Winnebago County GIS staff. Building footprints are also complete for Towns that are not in County Zoning jurisdiction. These building footprints were heads-up digitized off the 1991, 1997, 2000, 2003, 2005, 2009 and 2015 orthoimagery.

#### **Custodian**

- Winnebago County GIS

#### **Maintenance**

- On a weekly basis the Winnebago County Zoning Office provide the copies of the foundation plan and permit to the Winnebago County GIS staff for updating the building footprint data



within County Zoning Jurisdiction. The cities of Menasha, Neenah, Omro, Oshkosh, and Village of Winneconne maintain their own building footprints. On a monthly basis, the Village of Fox Crossing sends their building permits and site maps to Winnebago County GIS to be incorporated.

#### **Standards**

- None

## **Other Types of Address Information**

### **e.g., Address Ranges**

#### **Layer Status**

- Current site addresses are attributed on street centerlines for all of Winnebago County and some outlying areas in surrounding counties that have shared assistance agreements with the Winnebago County 911 Dispatch Center. The address range layer is complete for Winnebago County.
- The 911 street centerline file contain attribute for jurisdiction.
- Linked to the normalized street name table.
- Assigned the local name and then linked to the street name alias table for alternate names and designations that the 911 Center uses.
- The 911 street centerline file contains attributes for address ranges formatted as Left/Right, Low/High.

#### **Custodian**

- Winnebago County GIS

#### **Maintenance**

- Completed daily by the Winnebago County GIS

#### **Standards**

- Address ranges compiled to meet the Winnebago County Uniform Addressing Code.

## **Street Centerlines**

#### **Layer Status**

- Winnebago County Street Centerline layer is 100% complete - maintenance phase

#### **Custodian**

- Winnebago County GIS Department

#### **Maintenance**

- As needed. Street centerlines are added using new subdivisions and road plans.

#### **Standards**

- Winnebago County "WINGS" project

## **Rights of Way**

#### **Layer Status**

- Winnebago County Right-of-way layer is 100% complete - maintenance phase

#### **Custodian**

- Winnebago County GIS Department

#### **Maintenance**

- As needed

#### **Standards**

- Winnebago County "WINGS" project

## Trails

e.g., Recreational Trails

### Layer Status

- Recreational trails are complete for Winnebago County.

### Custodian

- Winnebago County GIS

### Maintenance

- Recreational trails are compiled from the most recent orthoimagery.
- Naming of the recreational trails is in coordination with the Winnebago County Parks Department.

### Standards

- None

## Land Use

### Current Land Use

#### Layer Status

- The current or existing land use was completed in 2010.

#### Custodian

- East Central Wisconsin Regional Planning Commission.

#### Maintenance

- East Central Wisconsin Regional Planning Commission.

#### Standards

- East Central Wisconsin Regional Planning Commission current land use mapping standard.

### Future Land Use

#### Layer Status

- Future land use was completed for the entire County as part of the Multi-Jurisdictional Comprehensive Plan for Winnebago County: 2016-2035

#### Custodian

- Winnebago County GIS

#### Maintenance

- The Winnebago County Board may consider an update to the county comprehensive plan in early 2025. The current comprehensive plan has a planning horizon to 2035.

#### Standards

- s. 66.1001, Wis. Stats. Comprehensive planning.
- Future land use mapping for the county is a patchwork of maps from comprehensive plans adopted by municipalities and the county.

## Zoning

### County General Zoning

#### Layer Status

- The County does maintain a GIS representation of county general zoning boundaries for all Towns within the County Zoning jurisdiction.

#### Custodian

- Winnebago County GIS

### Maintenance

- Maintained on a monthly basis after Planning and Zoning Committee and County Board approval.

### Standards

- Winnebago County Zoning Ordinance.

## Shoreland Zoning

### Layer Status

- Winnebago County Shoreland Zoning layer is 100% complete – maintenance phase

### Custodian

- Winnebago County GIS Department

### Maintenance

- As needed

### Standards

- Winnebago County "WINGS" project

## Farmland Preservation Zoning

### Layer Status

- The County does maintain a GIS representation of county farmland preservation zoning boundaries.
- **Year of certification:** 2012

### Custodian

- Winnebago County GIS Department

### Maintenance

- Farmland Preservation boundaries are static for duration of certification period

### Standards

- DATCP standards for certification

## 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.
- **Letters of Maps Change.** Letters of Map Amendments (LOMA's) process is done to remove all or a portion of tax parcels and structures out of the floodplain.

### Custodian

- Federal Emergency Management Agency (FEMA)
- Winnebago County GIS Planning/Zoning/GIS

### Maintenance

- Federal Emergency Management Agency (FEMA)
- Winnebago County GIS Planning/Zoning/GIS

### Standards

- Federal Emergency Management Agency (FEMA) floodplain standards.

## Airport Protection

### Layer Status

- Winnebago County Airport Protection layers are 100% complete – maintenance phase
- **Airport protection zoning map depicts:**

- Height limitation restrictions
- General zoning overlay for airport protection

#### Custodian

- Winnebago County GIS Department

#### Maintenance

- Height limitation areas are static, however, the airport zoning overlay districts are maintained as needed.

#### Standards

- Winnebago County "WINGS" project

## 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

- Eleven towns: Black Wolf, Clayton, Nepeuskun, Oshkosh, Poygan, Rushford, Utica, Vinland, Winchester, Winneconne and Wolf River have Winnebago County perform zoning map creation and maintenance to support each of their Town Zoning Ordinances.
- One village: Village of Winneconne has Winnebago County perform zoning map creation and maintenance to support each of their Village Zoning Ordinance.
- One city: City of Omro has Winnebago County perform zoning map creation and maintenance to support each of their City Zoning Ordinance.

#### Custodian

- Winnebago County GIS

#### Maintenance

- Monthly as approved by City/Town/Village Zoning Committees, Winnebago County Planning and Zoning Committee and Winnebago County Board.

#### Standards

- City, Town and Village Zoning Ordinances for all municipalities listed.

## Administrative Boundaries

### Civil Division Boundaries

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

#### Layer Status

- Winnebago County Minor Civil Division layer is 100% complete - maintenance phase

#### Custodian

- Winnebago County GIS Department

#### Maintenance

- As needed

#### Standards

- Winnebago County "WINGS" project

## School Districts

#### Layer Status

- **Progress toward completion/maintenance phase:** Maintenance phase
- **Relation to parcels:** School district boundaries were derived from tax parcel records.
  - **Attributes linked to parcels:** School district info is maintained through county tax records and is included as name and code attributes in the parcel layer.

#### **Custodian**

- Winnebago County GIS Department

#### **Maintenance**

- As needed

#### **Standards**

- Winnebago County "WINGS" project

### **Election Boundaries**

#### **Voting Districts, Precincts, Wards, Polling Places, etc.**

##### **Layer Status**

- Winnebago County Voting Ward layer is 100% complete - maintenance phase. It includes attributes detailing voting district (i.e. Congressional, State Senate, State Assembly, Supervisory, and Aldermanic) and polling place information.

##### **Custodian**

- Winnebago County GIS Department

##### **Maintenance**

- As needed

##### **Standards**

- Designed to meet the standards required to participate in the WISE-Decade CBAS semi-annual update.

### **Utility Districts**

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

##### **Layer Status**

- Winnebago County Sanitary District layer is 100% complete - maintenance phase

##### **Custodian**

- Winnebago County GIS Department

##### **Maintenance**

- As needed

##### **Standards**

- Winnebago County "WINGS" project

### **Public Safety**

#### **e.g., Fire/Police Districts, Emergency Service Districts, 911 Call Center Service Areas, Public Safety Answering Points, Healthcare Facilities**

##### **Layer Status**

- Winnebago County has Fire/Police District layers for the operation of the PremierOne CAD/Mobile system. Winnebago County also has emergency facility locations included in a layer used for the County's Natural Hazard Mitigation Plan.

##### **Custodian**

- Winnebago County GIS Department
- Winnebago County Emergency Management

##### **Maintenance**

- As needed

##### **Standards**

- PremierOne CAD/Mobile system requirements and Winnebago County "WINGS" project

## Lake Districts

### Layer Status

- Winnebago County does not have a Lake Districts layer.

## Native American Lands

### Layer Status

- Winnebago County does not have a Native American Lands Districts layer.

## Other Administrative Districts

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

### Layer Status

- Winnebago County does have a Parks layer.

### Custodian

- Winnebago County GIS Department

### Maintenance

- As needed

### Standards

- Winnebago County "WINGS" project

## Other Layers

### Hydrography Maintained by County or Value-Added

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

### Layer Status

- Complete county-wide line feature that represents the navigable stream locations adjusted to orthos.

### Custodian

- Winnebago County GIS

### Maintenance

- Maintained as warranted through WI Department of Natural Resources (WDNR) navigability determination letters.

### Standards

- Winnebago County "WINGS" project

## Cell Phone Towers

### Layer Status

- All towers registered with the Federal Communications Commission (FCC) and permitted are complete within Winnebago County.

### Custodian

- Winnebago County GIS

### Maintenance

- Updated on an annual basis.

### Standards

- FCC Antenna Structure Registration and Winnebago County Zoning General Code

## Bridges and Culverts

### Layer Status

- Winnebago County bridge and culvert layer are 100% complete - maintenance phase

**Custodian**

- Winnebago County Highway Department

**Maintenance**

- Weekly

**Standards**

- None

**Other**

**e.g., Pipelines, Railroads, Non-Metallic Mining, Sinkholes, Manure Storage Facilities, etc.**

**Layer Status**

- Winnebago County railroad layer is 100% complete - maintenance phase

**Custodian**

- Winnebago County GIS

**Maintenance**

- Railroads are kept up-to-date through the use of recorded documents (Certified Survey Maps, Subdivision Plats and Railroad Right-of-way Descriptions).

**Standards**

- None



# 3 LAND INFORMATION SYSTEM

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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:

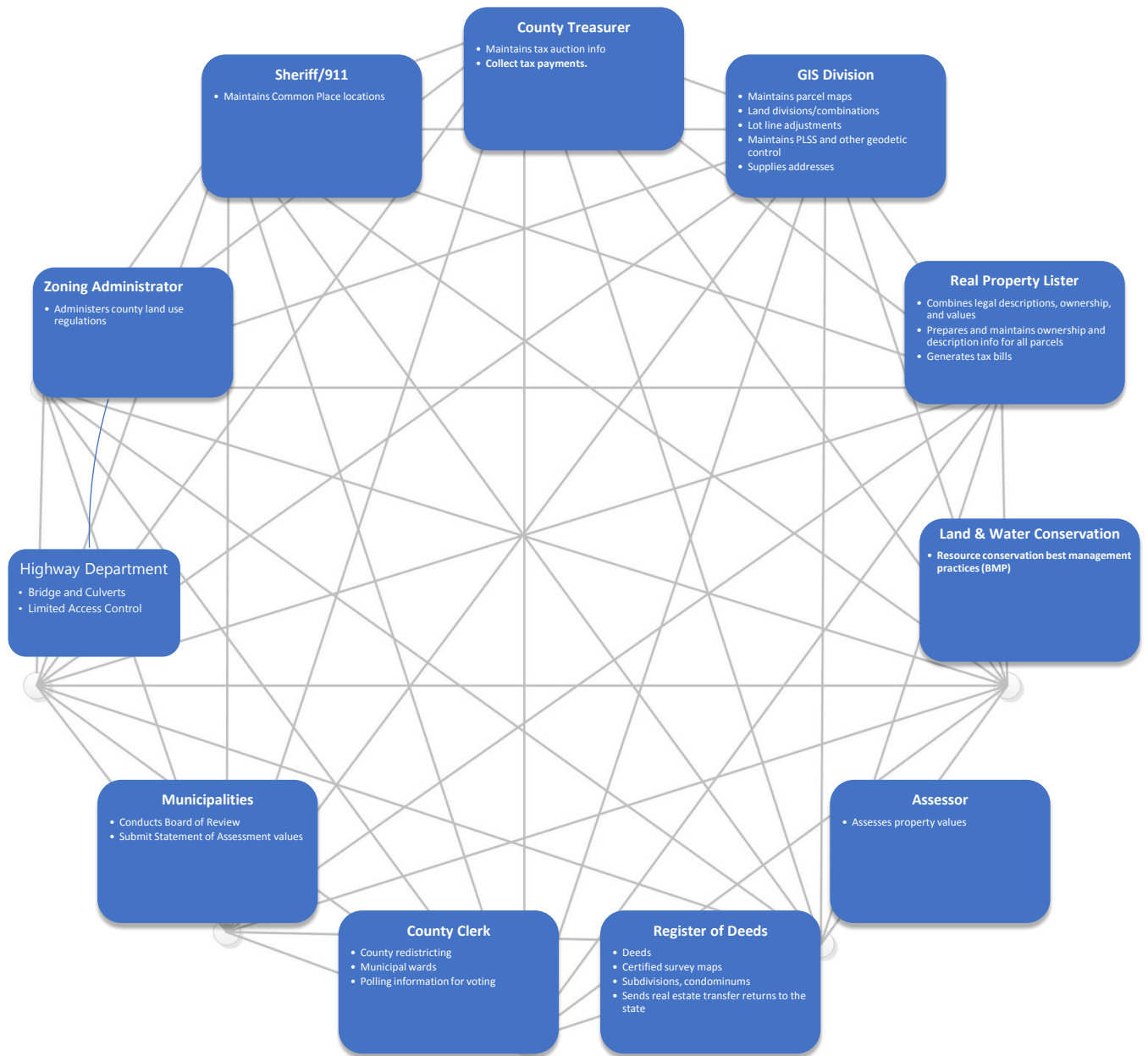
- The design, development, and implementation of a land information system that contains and integrates, at a minimum, property and ownership records with boundary information, including a parcel identifier referenced to the U.S. public land survey; tax and assessment information; soil surveys, if available; 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

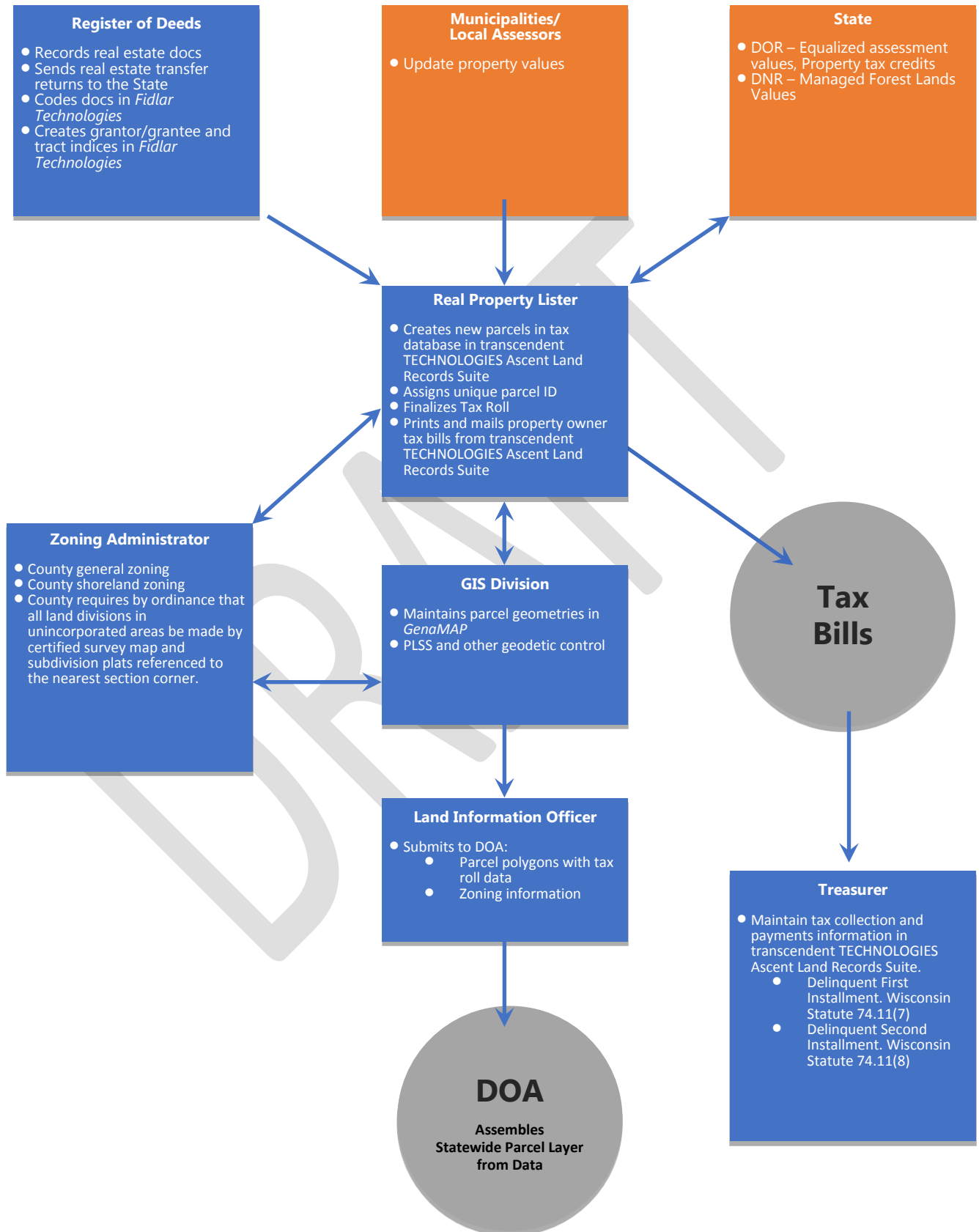
### Diagram of Winnebago County Land Information System

This section features a diagram that documents the county's land information system and/or the various inter-organizational workflows it encompasses.



## Winnebago County Parcel Data Workflow Diagram

This diagram documents the county's parcel mapping and tax roll process from the Register of Deeds Department to the final export to DOR. The diagram shows the parcel workflow from recorded documents to parcel creation along with data maintenance.



## 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

- Land information systems are integrated into the general county Information Systems (IS) environment. Servers are created in the county's virtualized server environment and integrated in enterprise maintenance, back-up and disaster recovery plans/systems. All servers are in a climate controlled environment and served with backup power.
- Endpoints are selected based on the need of the end user. Endpoints range from thin clients for nongraphic data entry to high-end workstations for those with graphic intensive workflows. Mobility continues to be a driving factor with laptops and increasingly tablets and smart devices being deployed. All devices are networked, with the option of disconnected editing when needed.
- Peripherals include large format plotters and a large format scanner in addition to the more routine office print and scan devices.

### Software

- Winnebago County utilizes various software's to maintain its GIS and Land Information Systems:
  - Mapping – Esri's ArcGIS Desktop and ArcGIS Professional, with extensions, are used for nearly all desktop GIS needs. Licenses are pooled to maximize investment and the availability of GIS software to county staff.
  - Land Information – Transcendent Ascent suite
  - Register of Deeds – Fidlar Technologies
  - The core GIS datasets are maintained in an Esri enterprise geodatabase using Microsoft SQL Server. This provides a robust, multi-user environment to store, update and serve data to all county users. The database design of these GIS features uses the Local Government Information Model and includes the necessary primary keys to ensure integration with related tabular data. National and State standards and vendor supplied best practices are considered whenever databases are designed.

### Website Development/Hosting

- ArcGIS Enterprise, including Portal for ArcGIS, is currently used to publish data for Internet distribution. The published services are consumed by internal and ArcGIS On-line applications. Web AppBuilder for ArcGIS along with industry solution templates are the basis for Winnebago County's mapping web applications. Because the services are publically available, authoritative data is available for inclusion in applications that are not created or hosted by Winnebago County.

## Metadata and Data Dictionary Practices

### Metadata Creation

- **Metadata creation and maintenance process:** Metadata is included as a deliverable whenever new data is acquired. Metadata is created for all core features at the feature dataset level. The metadata is periodically reviewed and updated as needed. The metadata is supplemented with data schema diagrams and data dictionaries

### Metadata Software

- **Metadata software:** Esri's ArcCatalog has been the software used to develop and maintain geospatial metadata.
  - 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:** Field description (attributes) are manually populated if created for a GIS layer.

#### Metadata Policy

- **Metadata Policy:** No requirements.

#### Municipal Data Integration Process

- At present, the County does not have any formal data sharing agreements. However, municipal data is periodically integrated into the county land information system on an annual basis or earlier utilizing ETL processes that integrate tax data from city systems to county systems to create countywide layers.
- The County has worked with a number of municipalities to allow read-only or read/write direct connections to enterprise geodatabases.
- The County published REST end points are available for municipal use to display county hosted data within their own intra-net or internet applications.
- Although now rare, in some cases data is still exchanged using DVD's or ftp.

## Public Access and Website Information

### Public Access and Website Information (URLs)

#### Public Access and Website Information

##### GIS Webmapping Application(s) Link - URL

<https://wcgis3.co.winnebago.wi.us/portal/home/>

##### GIS Download Link - URL

None

##### Real Property Lister Link - URL

<https://wcws10.co.winnebago.wi.us/LandRecords/PropertyListing/RealEstateTaxParcel>

##### Register of Deeds Link - URL

<https://tapestry.fidlar.com/Tapestry2/Search.aspx>

#### Municipal Website Information

##### Municipal Website

##### Municipal Website URL

City of Oshkosh GIS/Online Maps

[http://www.ci.oshkosh.wi.us/Administrative\\_Services/Information\\_Technology/GIS/disclaimer.asp](http://www.ci.oshkosh.wi.us/Administrative_Services/Information_Technology/GIS/disclaimer.asp)

City of Neenah Interactive Maps

<https://www.ci.neenah.wi.us/departments/gis/interactive-maps/>

DRAFT

## **Data Sharing**

### **Data Availability to Public**

#### **Data Sharing Policy**

- Most land records are accessible to the public through free on-line applications. This information is provided free to the public and offers them the ability to print maps along with property information. If an individual needs a hard copy they can contact the County with their request and will be charged a minimal fee to cover the cost of reproduction.
- Statutory fees are charged when accessing documents recorded in the Register of Deeds.
- Access to the data is also available through publically accessible services or free data download.

#### **Open Records Compliance**

- Winnebago County has always had a practice of complying with Wisconsin's Open Records law by providing hardcopies at a minimal charge and now offers access to data online for free.

### **Data Sharing Restrictions and Government-to-Government Data Sharing**

#### **Data Sharing Restrictions**

- None. Per Corporation Counsel, all information available on the County website or produced by the County GIS staff is public information; therefore no privacy policies are required.

#### **Government-to-Government Data Sharing**

- Currently, the County does not have any formal or informal data sharing agreements with government to government. Winnebago County would not restrict the sharing of any land record information/data sharing generated from the efforts to integrate and cooperate on mutual projects.

### **Training and Education**

- The last few years have seen major shifts in expectations, and these have had a huge impact on county government. Many county governments are looking for ways not only to meet these expectations but also to create new products and services that reach our citizens timely and efficiently.
- In order to fulfill this expectation, a GIS staff development and training budget item has been established. This budget enhances staff skills and knowledge to support current/future GIS projects and initiatives. Despite the amazing technology that permeates our profession, knowledgeable staff remain the key. No computer has ever created a map all by itself.
- GIS technical staff meetings are held on a bi-annual basis to address issues and requests that have been identified by WINGS participants.
- In addition, educational workshops related to GIS functions and resources are provided for internal and external GIS users.



# 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.

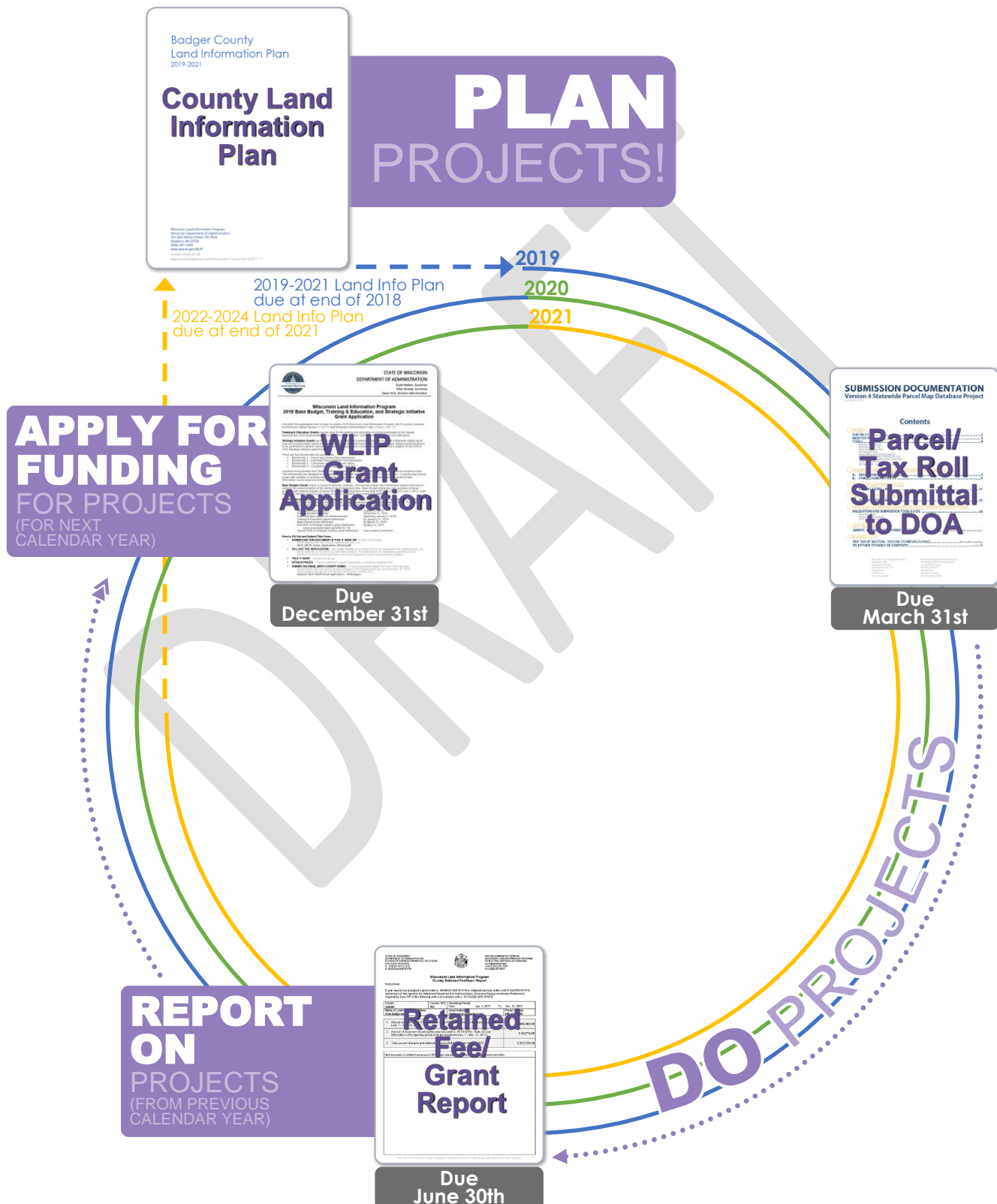


Figure 1. The WLIP Land Information Plan/Grant Project Cycle

## Project #1: Indexing of documents by geography in GIS

### Project Description/Goal

- To expand the use of document imaging and GIS to “geocode” documents to geography (such as historical permits and surveyor records) and make them available to the public via the Internet.
- **Land Info Spending Category:** PLSS (also affects Parcel Mapping, and Other Layers)

### Business Drivers

- County business data lacks detailed location information, making it less useful
- Increase efficiency of Zoning Department locating historical permits
- Call-Before-You-Dig hotline lacks detailed location information
- Surveyors need to access historical records

### Objectives/Measure of Success

- Historical permits and surveyor records 100% searchable
- Geographically indexed apps available on the county website

### Project Timeframes

| Timeline – Project #1 Indexing of documents by geography in GIS |          |                      |
|---|----------|----------------------|
| Milestone   | Duration | Date                 |
| Project #1 start  | –        | Jan 2019             |
| Index permits   | 1 month  | May 1–June 30 2019   |
| Index other surveyor records                                    | 4 months | June 1–Sept 30, 2019 |
| Build apps  | 3 months | Oct 1–Dec 31, 2019   |
| Project complete  | –        | Dec 31, 2019         |

### Responsible Parties

- GIS staff 90% and Contractors 10%

### Estimated Budget Information

- See table at the end of this chapter.

## Project #2: Public Land Survey System Monument Maintenance

### Project Description/Goal

- Maintain all public land survey system monuments and ties in Winnebago County. The purpose of the project is to inspect every monument in the county at least once every 12 years.
- **Land Info Spending Category:** PLSS

### Business Drivers

- Winnebago County has spent considerable resources to re-monument the entire county.
- Maintenance is needed to protect this investment.
- If a single monument is lost, it is less expense to relocate one monument than it would be if there was a significant deterioration of the network.
- Surveyors and other professionals rely on the monuments.
- Monuments are the basis for all land descriptions
- Many GIS layers are referenced to the PLSS network

### Objectives/Measure of Success

- 100% of monuments are placed and stable.
- Every monument has at least 4 ties.

### Project Timeframes

| Timeline – #2: Public Land Survey System Monument Maintenance |          |      |
|---|----------|------|
| Milestone   | Duration | Date |

|   |   |               |
|---|---|---------------|
| Phase I – Monument inspection and reporting | – | Jan-June 2019 |
| Phase II – Monument Repair                  | – | July-Dec 2021 |

### Responsible Parties

- Contractors 90% and GIS staff 10%

### Estimated Budget Information

- See table at the end of this chapter.

## Project #3: 2020 Orthophotography Acquisition

### Project Description/Goal

- Obtain countywide, leaf-off, 4-band orthophotography with 6" pixel resolution in spring 2020. This project may include oblique images.
- **Land Info Spending Category:** Orthoimagery

### Business Drivers

- GIS Orthophotography is one of the most used layers in the county GIS and is used to determine current ground condition and the measurement of ground features.
- Current orthophotography is important for zoning, planning, law enforcement and other county programs.
- Orthophotography is the base on which other layers like surface water and address points are digitized.
- Continual changes in land use requires periodic updates.

### Objectives/Measure of Success

- Delivery of Orthophotography meeting all project specifications.

### Project Timeframes

| Timeline – #3: 2020 Orthophotography Acquisition |          |                  |
|--|----------|------------------|
| Milestone  | Duration | Date             |
| Phase I – Ortho flight                           | –        | March-April 2020 |
| Final Deliverable                                | –        | Dec 2020         |

### Responsible Parties

- Contractors 90% and GIS staff 10%

### Estimated Budget Information

- See table at the end of this chapter.

## Project #4: Redesign and update County GIS site

### Project Description/Goal

- Redesign County public GIS site to provide new tools and easier access.
- **Land Info Spending Category:** Website Development/Hosting Services

### Business Drivers

- Current GIS website was developed in 2008
- Newer version of ESRI's software have been released
- Website will provide access to additional data as well as "Open Data"

### Objectives/Measure of Success

- Create new GIS site offering new tools and additional data
- Improved access to all users of the county's GIS system

## Project Timeframes

| Timeline – #4: Redesign and update County GIS site |          |          |
|--|----------|----------|
| Milestone  | Duration | Date     |
| Project #4 start                                   | –        | Jan 2019 |
| Migrate data                                       | 1 year   |          |
| Test and publish sites                             | 1 year   |          |
| Project complete                                   | –        | Dec 2021 |

## Responsible Parties

- GIS staff 90% and Contractors 10%

## Estimated Budget Information

- See table at the end of this chapter.

## Project #5: In-field data collection with mobile GPS/GIS technology

### Project Description/Goal

- County staff would collect data in field with mobile GPS/GIS technology to support on-going programs and County records
- **Land Info Spending Category:** Web Host / Hardware

### Business Drivers

- Reduced costs and more efficient technologies for collecting, maintaining, and sharing records.

### Objectives/Measure of Success

- Accurate, easily-shared records with cost-effective technology

## Project Timeframes

| Timeline – #5: In-field data collection with mobile GPS/GIS technology |          |          |
|--|----------|----------|
| Milestone  | Duration | Date     |
| Project #5 start   | –        | Jan 2020 |
| Set-up / training  | 3 months |          |
| Data collection testing and manage records                             | 6 months |          |
| Project complete   | –        | Oct 2020 |

## Responsible Parties

- GIS staff 90% and Contractors 10%

## Estimated Budget Information

- See table at the end of this chapter.

## Project #6: Online Land Use and Sanitary permit applications

### Project Description/Goal

- Develop software/application to allow contractors and plumbers to submit applications online.
- **Land Info Spending Category:** Software and Administrative Activities

### Business Drivers

- Current applications are paper and must be filled out by hand and submitted in person to Zoning Department
- Decrease in staff
- Digital submittals will allow for a quicker review and approval

### Objectives/Measure of Success

- Go from paper applications and permits to digital

- Increase response time for obtaining permits
- Contractors and plumbers allowed to submit applications from office or home
- All applications are submitted electronically

## Project Timeframes

| Timeline – #6: Online Land Use and Sanitary permit applications |          |          |
|---|----------|----------|
| Milestone   | Duration | Date     |
| Project #6 start  | –        | Jan 2019 |
| Review RFP's and initial setup                                  | 6 months |          |
| Meet with stakeholders and develop a plan                       | 1 year   |          |
| Testing   | 4 months |          |
| Project complete  | –        | Dec 2021 |

## Responsible Parties

- Contractors 90% and GIS staff 10%

## Estimated Budget Information

- See table at the end of this chapter.

## Project #7: Ongoing Costs Not Associated with a Specific Project

### Project Description/Goal

- Maintain on-line mapping capabilities. This includes server software support, hosting fees, internal charges directly related to the maintenance of on-line mapping applications and external agreements for minor tweaks to the application.
- Enhance the budget of the GIS Office by funding hardware acquisition for those responsible for maintaining land information, GIS software support, and training of GIS staff.
- **Land Info Spending Category:** Software, Hardware, Website Development/Hosting Services, Training and Education, Other

### Business Drivers

- Public demand for access to public information
- County staff have the tools and training necessary to be efficient

### Objectives/Measure of Success

- GIS mapping sites are available to the public and integrated with related systems.
- Staff are appropriately trained and current in their field.
- Software/Hardware is supported and upgraded to current versions.
- Staff have the hardware and software to be effective.

## Project Timeframes

- Not applicable

## Responsible Parties

- Not applicable

## Estimated Budget Information

- See table at the end of this chapter.

## Project #8: PINtegrity with Parcel Management

### Project Description/Goal

- PINtegrity is currently a module within AVID that essentially allows for validation (or editing, if need be) of the property information associated with a parcel number. With PINtegrity, you can enter one of three elements of information associated with the parcel of land:

- PIN number
- Legal index (Note: legal description could actually be thought of as a 4th link.)
- Property street address
- Upon entering one of these criteria, the other two will display. This will allow the Recorder to validate what is currently in the DB against what is shown on the document. Or, if you want a more complete index, assume only one of the three criteria listed above is shown on the document, you can enter it, have the other two display, and use those to populate your index – this will result in a more comprehensive index.
- Parcel Management is a tool that allows a Recorder's office to enter new parcel numbers (supplied from RPL) into your PINtegrity DB. This can occur when a new parcel is created or when a parcel is split into a parent/child relationship. Also allows for the correcting of wrongly indexed/entered data.
- **Land Info Spending Category:** Software, Hardware, Training and Education, Other

## Business Drivers

- Streamline our processes, improve the integrity of our data entry, and, when applicable, to work more effectively and in a more streamlined manner with other county offices. We've recognized a very clear fact that when offices within the courthouse work together, everybody wins by saving data entry time, improving accuracy, and improving our services to the public.
- Our county offices may speak a different language when describing documents and their legal descriptions and our customers mostly know their addresses only. PINtegrity and Parcel Management will bridge that communication gap by allow the ROD to utilize all three communication languages; legal description, PIN and property address when available.
- Automatically populate some of the legal description based on the data from the office that manages the PIN's
- Easily keep the Parcel Numbers updated and current in the ROD system.
- Validation of legal descriptions against document being recorded.

## Objectives/Measure of Success

- Percentage of PIN imported into AVID systems from RPL.
- Increased accuracy during indexing with reports.

## Project Timeframes

| Timeline – #8: PINtegrity with Parcel Management |              |          |
|--|--------------|----------|
| Milestone  | Duration     | Date     |
| Project #8 start                                 | –            | Jan 2020 |
| PIN import from RPL to ROD                       | 1 - 2 months |          |
| Training   | 2 – 4 weeks  |          |
| Testing  | 2 – 4 weeks  |          |
| Project complete                                 | –            | Dec 2021 |

## Responsible Parties

- RPL – 20%
- ROD – 30%
- FIDLAR TECHNOLOGIES – 50%

## Estimated Budget Information

- See table at the end of this chapter.

## Estimated Budget Information

| Project Title  | Item   | Unit Cost/Cost     | Land Info Plan                      | Project Total |
|--|--|--------------------|-------------------------------------|---------------|
|  |  |                    | Citations<br>Page # or section ref. |               |
| 1) Indexing of documents to geography in GIS               | Desktop scanners   | \$10,000           | Page 31                             | 10,000        |
| 2) Public Land Survey System Monument Maintenance          | Contractor   | \$25,000 @ 3 years | Page 31                             | 75,000        |
| 3) 2020 Orthophotography Acquisition                       | Contractor   | \$75,000           | Page 32                             | 75,000        |
| 4) Redesign and update County GIS site                     | In-house   | \$30,000           | Page 32                             | 30,000        |
| 5) In-field data collection with mobile GPS/GIS technology | GPS unit   | \$15,000           | Page 33                             | 15,000        |
| 6) Online Land Use and Sanitary permit applications        | Software   | \$50,000           | Page 33                             | 50,000        |
| 7) Ongoing Costs Not Associated with a Specific Project    | Technology maintenance expenditures                                | \$420,000          | Page 34                             | —             |
|  | Hardware/Software upgrades and future WINGS operational activities | \$150,000          | Page 34                             | —             |
|  |  |                    |                                     | 570,000       |
| 8) PINtegrity with Parcel Management                       | PIN conversion from RPL  | \$14,000           | Page 34                             |               |
|  | Software Maintenance   | \$2,000/year       | Page 34                             | 16,000        |
|  |  |                    |                                     |               |
|  |  |                    |                                     |               |
| GRAND TOTAL  |  |                    |                                     | 841,000       |

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

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