



# Draft Dunn County Land Information Plan 2022-2024

As directed by the Wisconsin Land Information Program  
Wisconsin Department of Administration  
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[www.doa.wi.gov/WLIP](http://www.doa.wi.gov/WLIP)

Version: 2021-12-09

Approved by the Land Information Council on: 12/15/2021

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# EXECUTIVE SUMMARY

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**About this Document.** This document is a visioning guide and land information plan for Dunn County prepared by the land information office (LIO) staff and reviewed by the Dunn County land information council (LIC.) 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 both private sector and internal and external governmental stakeholders.

**WLIP Background.** The Wisconsin Land Information Program, WLIP, is administered by the Wisconsin Department of Administration, and is funded by document recording fees collected by register of deeds at the county-level. In 2020, Dunn County was awarded \$90,568 in WLIP grants and retained a total of \$60,432 in local register of deeds document recording fees for land information modernization efforts.

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 Dunn County.** Land information is central to county operations, as many essential services rely on accurate and up-to-date geospatial data and land records information. A countywide land information system supports economic development, emergency planning and response, and a host of other citizen services. The Dunn 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. This is only a small sample of the resources that are created, and maintained, through the Dunn County Land Information Office.

**Mission of the Land Information Office.** In the next three years, Dunn County’s Land Information Office strives to be recognized for its exceptional and modernized web mapping sites and applications (apps). We are targeting improvements in governmental efficiencies by broadening the utilization of the GIS, improvements in parcel mapping precision by integrating a survey accurate framework into the fabric, and introducing a new level of responsiveness and agility in meeting the land records needs of all our customers.

**Land Information Office Projects.** To realize this mission, in the next three years, the county land information office will focus on the following projects: (also see the designated section for new projects later in this document)

## Future Projects

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

**Project Plan for PLSS (Benchmark 4)**

**Project #1: Emergency Management Data Development**

**Project #2: Water Resources Data Updates & Development**

**Project #3: Continued Expansion of Web & Mobile Mapping Applications**

**Project #4: Aerial Imagery Collection**

**Project #5: Development of Building Footprints Layer & Maintenance Plan**

**Project #6: Right-of-Way Development for Highways**

**Project #7: Training & Education**

**Project #8 : Editing for Parcel Fabric Accuracy and PLSS Line Work (cleanup)**

**Project #9: GIS and Land Records Management software hosting and maintenance services**

The remainder of this document provides more details on Dunn 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 (SI) grants to be prioritized for the purposes of parcel/tax roll dataset improvement.

For Strategic Initiative grant eligibility, counties are required to apply WLIP funding toward achieving certain statewide objectives, specified in the form of "benchmarks." Benchmarks for parcel data—standards or achievement levels on data quality or completeness—were determined through a participatory planning process. Current benchmarks are detailed in the WLIP grant application, as will be future benchmarks.

### WLIP Benchmarks (For 2016-2021 Grant Years)

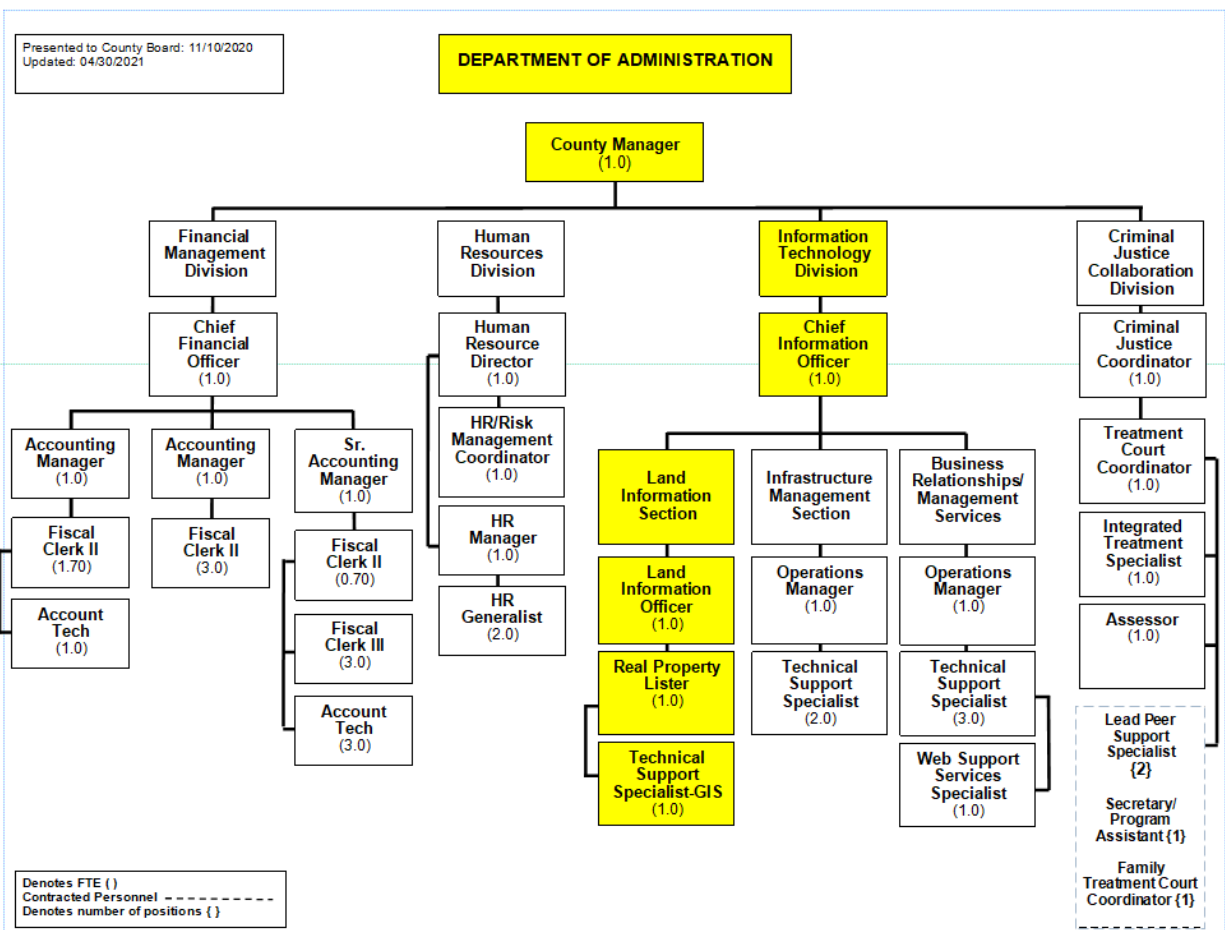
- Benchmark 1 & 2 – Parcel and Zoning Data Submission/Extended Parcel Attribute Set Submission
- Benchmark 3 – Completion of County Parcel Fabric
- Benchmark 4 – Completion and Integration of PLSS

More information on how Dunn County is meeting these benchmarks appears in the Foundational Elements section of this plan document starting on page 10.

## County Land Information System History and Context

Dunn County has a rich tradition of land records, spanning across many departments over the last 3 decades. In the mid to late 1990's, the Dunn County land records program was primarily driven by the real property, surveying, zoning and land conservation departments. As the county advanced in its computer and database networking and storage functionality, the county electronic data processing (EDP) department became more of an integral part of the modernization plan that was being developed. In 2006, a newly dedicated geographic information systems (GIS) specialist position was created and placed within the management information systems (MIS), formerly EDP, department. The technical, fast changing, and growing profession of GIS, and the land information field, made MIS a logical home for this new position.

Over 15 years later, after many retirements, department restructuring/relocations, and personnel changes, that GIS position has evolved into the land information officer (LIO) position (within the Land Information Section), as a section of the Information Technology (IT), formerly MIS, division, and under the direction of the Department of Administration. In 2016, a reorganization of the IT division took place, and a designated full time GIS/IT Specialist position, within the Land Information Section, was created. (*Current organizational chart showing land records structure hierarchy is shown below.*) The Real Property Lister position was converted to full time in 2016 and remains part of the Land Information Section.



## County Land Information Plan Process

County land information plans were initially updated every five years. However, as a result of Act 20, counties must update and submit their plans to DOA for approval every three years. The 2022-2024 plan, completed at the end of 2021, is the third post-Act 20 required update.

### County Land Information Plan Timeline

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

### Plan Participants and Contact Information

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

According to s. 59.72(3m), Wis. Stats., the county land information council is to include:

- Register of Deeds
- Treasurer
- Real Property Lister or designee
- Member of the county board
- Representative of the land information office
- A realtor or member of the Realtors Association employed within the county
- A public safety or emergency communications representative employed within the county
- County surveyor or a registered professional land surveyor employed within the county
- Other members of the board or public that the board designates

The land information council must have a role in the development of the county land information plan, and DOA requires county land information councils to approve final plans.

This plan was prepared by the county land information staff, the Dunn County Land Information Council, and others as listed below.

**County Land Information Council and Plan Workgroup**

<b>Name</b>	<b>Title</b>	<b>Affiliation</b>	<b>Email</b>	<b>Phone</b>
*Steve Kochaver	Land Information Officer	Dunn County Land Information Office	skochaver@co.dunn.wi.us	715-231-6508
*A. Sifia Jevne	Treasurer	Dunn County Treasurer's Office	ajevne@co.dunn.wi.us	715-231-6561
*Sarah Edwards	Real Property Lister	Dunn County Land Information Office	sjedwards@co.dunn.wi.us	715-231-6517
*David Bartlett	County Board Member (Chair)	Dunn County Executive Committee	dbartlett@co.dunn.wi.us	715-231-6405
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*Kelly McCullough	County Board Member	Dunn County Executive Committee	kmccullough@co.dunn.wi.us	

\* Land Information Council Members designated by asterisk

# 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 (98% complete but also in maintenance phase)

PLSS Layer Status	
	Status/Comments
Number of PLSS corners (section, ¼, meander) <b>set in original government survey</b> that can be remonumented in your county	<ul style="list-style-type: none"> <li>2800</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>2759 or 98.5%</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>2275 or 82% (all survey grade, no other positions, with lesser accuracies, are listed)</li> </ul>
Number and percent of survey grade PLSS corners integrated into county digital parcel layer	<ul style="list-style-type: none"> <li>Approximately 2000 (71%) (See PLSS and parcel mapping pilot project in section 4 as it relates to Benchmark IV.)</li> </ul>
Number and percent of non-survey grade PLSS corners integrated into county digital parcel layer	<ul style="list-style-type: none"> <li>None, although our original parcel mapping vendor integrated a lot of aerial photo “picks” if no survey grade coordinates were available.</li> </ul>
Tie sheets available online?	<ul style="list-style-type: none"> <li>Yes (<a href="http://dunncowi.wgxtreme.com/">http://dunncowi.wgxtreme.com/</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%</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>It is estimated to be around 480 per the county surveyor’s office.</li> </ul>
Approximate number of PLSS corners believed to be lost or obliterated	<ul style="list-style-type: none"> <li>According to the county surveyor, this item is too vague to report</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>The county currently indexes the PLSS corners with the Romportl number. There is also a description (e.g. “S ¼ 23-27-11 Dunn County Aluminum Monument”) that accompanies each corner.</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	254 total; Breakdown as follows ; Barron 49; Chippewa 51; Eau Claire 27; Pepin 49; Pierce 25; St. Croix 52; Polk 1;
Number and percent of PLSS corners remonumented along each county boundary	Barron 49 or 100%; Chippewa 51 or 100%; Eau Claire 27 or 100%; Pepin 49 or 100%; Pierce 25 or 100%; St. Croix 47 or 90%; Polk 1 or 100%
Number and percent of remonumented PLSS corners along each county boundary with survey grade coordinates	Barron 30 or 61%; Chippewa 34 or 67%; Eau Claire 17 or 63%; Pepin 41 or 84%; Pierce 25 or 100%; St. Croix 38 or 81%; Polk 1 or 100%
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>Dunn County surveyors office collaborates and communicates with each county when any PLSS activity is being conducted along common county boundaries.</li> </ul>

## Custodian

- Under the direction of Thomas P. Carlson, P.L.S. (Dunn County Surveyor)
- The Survey Division is part of the Dunn County Environmental Services Department. The County Surveyor reports to the County Administrator and to the governing Planning, Resources and Development Committee.
- Duties Include those referenced within Wi. State Statute §59.45)
- Serves as a member of the Land Information Council

## Maintenance

- Under the direction of Thomas P. Carlson, P.L.S. (Dunn County Surveyor)
- There are 2 main categories of the PLSS remonumentation program.
  - Setting new corners that have not been remonumented since the original GLO survey (this is an ongoing process within the county surveyor's office. The county surveyor's office is responsible for designating which area, and when any original remonumentation projects will occur.)
  - Maintaining the corners that have been re-set. This is a collaboration between the private surveyors that work in Dunn County, and the county surveyor's office staff. Note that when Chapter AE-7, of the administrative code, was re written in 2016, the new language mandated that the private surveyor maintains any PLSS corner that affects the survey he or she is working on. This has taken some of the onus off of the County Surveyor's office to keep these corners maintained. There has been a very noticeable increase in the amount of maintenance tie sheets that have been filed since this AE-7 re-write was implemented in 2016.

## 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 (Dunn County does not use this standard.)
  - **APPROXIMATE** – point precision within 5 meters or coordinates derived from public records or other relevant information (There may be occasions when this method/standard is needed in the event that there are no SURVEY GRADE coordinates available for parcel mapping and/or remapping in a certain area. The Dunn County Surveyor's Office does not supply these positions to the State Cartographer's Office for inclusion into the PLSS Finder application.)

## Other Geodetic Control and Control Networks

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

Layer Status **Maintenance Phase**

### HARN Layer Status

Name	Status/Comments
------	-----------------

Total number of HARN Stations originally set by the County in 1993.	109
Total number of HARN Stations that are still existing and usable	96
Total number of Height modernization Stations originally set by the State in 2012	76 (26 could be used as HARN Stations)
Total number of Height modernization Stations that are still existing and usable	76 (26 could be used as HARN Stations)
HARN stands for High Accuracy Reference Network	Normally brass caps in concrete with orange posts guarding the monument

### Custodian

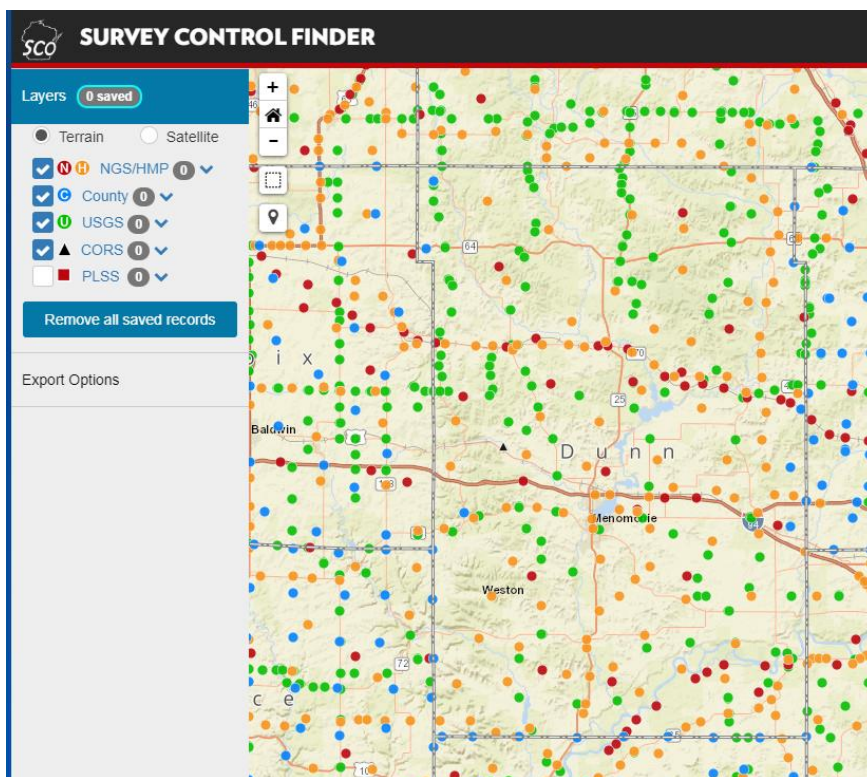
- Under the direction of Thomas P. Carlson, P.L.S. (Dunn County Surveyor)

### Maintenance

- These geodetic reference stations serve a variety of purposes. The Dunn County Surveyor's Office will occasionally designate time and resources to check in on these monuments, and perform any clearing, posting etc., as needed.
- Since the inception of the Wisconsin Continually Operating Reference System (CORS) network was expanded to this side of the state, the use for these HARN stations has gradually subsided.

### Standards

- The Wisconsin State Cartographer's Office has created, and maintains, a survey control finder application for these, and other available, monuments. The metadata for each individual control point can be obtained through this site.



- (<https://maps.sco.wisc.edu/surveycontrolfinder>)

# Parcel Mapping

## Parcel Geometries

### Layer Status Maintenance Phase

- **Progress toward completion/maintenance phase:** The Dunn county-wide parcel layer is in a maintenance phase, with several identified obstacles to be addressed before the parcel fabric can be considered cadastral quality. In Dunn County, 100% of the county's parcels are available in a commonly-used digital GIS format.
- **Projection and coordinate system:** Although the Dunn County parcel layer is built and maintained within the NAD\_1983\_HARN\_WISCRS\_Dunn\_County\_Feet, in house, it is submitted to the state parcel mapping project in their designated NAD\_1983\_HARN\_Wisconsin\_TM system. (meters)
- **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. The county however, has the ability to export a text file of tax/assessment data, and join that table to the polygon features based on PIN.
- **Online Parcel Viewer Software/App and Vendor name:**  
**WebGUIDE Xtreme (WGX)** – from contractor/vendor Applied Data Consultants  
(<http://dunncowi.wgxtreme.com/>)
- **Unique URL path for each parcel record:**

**Yes.** There are two URLs that can be utilized to link directly to a parcel record

**Via WGX :**

[http://dunncowi.wgxtreme.com/?parcelid=\[insert PIN number\]](http://dunncowi.wgxtreme.com/?parcelid=[insert PIN number])  
(ex. <http://dunncowi.wgxtreme.com/?parcelid=1701622813312100001> )

**Via GCS:**

[https://dunnportal.co.dunn.wi.us/GCSWebPortal/Search.aspx?ParcelNumber=\[ insert PIN number\]](https://dunnportal.co.dunn.wi.us/GCSWebPortal/Search.aspx?ParcelNumber=[ insert PIN number])  
(ex. [https://dunnportal.co.dunn.wi.us/GCSWebPortal/Search.aspx?ParcelNumber=\[ 1701622813312100001 \]](https://dunnportal.co.dunn.wi.us/GCSWebPortal/Search.aspx?ParcelNumber=[ 1701622813312100001 ]) )

### Custodian

- Our current process requires the land information officer and the GIS specialist to administer and maintain the polygon and PIN numbering elements of the parcel polygon fabric within the ESRI ArcMap (v. 10.5) desktop environment. The real property lister is responsible for the tax/assessment data maintenance within our newly implemented GCS Land Nav software suite.

### Maintenance

- **Update Frequency/Cycle.** In house parcel polygons are updated, usually, daily. This updating may be triggered by a number of circumstances including, but not limited to, identified corrections needed, (phone calls, internal requests, walk in landowners and the like) splits, merges and new parcel additions, which is rare.  
This polygon layer, which is then supplied to our website hosting vendor (ADC), is normally updated at least monthly, or more frequently if needed.

### Standards

- **Data Dictionary:**
- Does not currently exist. Dunn County plans to create both a data dictionary and metadata for the parcel data within the next three years. Our current metadata is old and out of date. (See Project #6.)
- Dunn County's annual submission to DOA as part of WLIP requirements meets their standard for acceptance. The 2021 submission was version 7 and Dunn County plans to adhere to future submission requirements, as they are potentially updated or changed.

## Assessment/Tax Roll Data

### Layer Status

- **Progress toward completion/maintenance phase:** NA
- **Tax Roll Software/App and Vendor name:** LandNav/GCS  
**Property Assessment & Tax Billing Module** – LandNav/GCS
- **Municipal Notes:** NA

### Custodian

- The land information office produces and maintains the assessment data and is primarily the work of the real property lister within that section.
- The tax billing and collection is administered by the Dunn County Treasurer's Office, in conjunction with the land information section.

### Maintenance

- **Maintenance of the Searchable Format standard:** To maintain the Searchable Format standard, the county will be utilizing the built in V7 export functionality through the GCS LandNav suite of land records management software. This export process continues to require refinements and review.
- **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. This statement is especially true for our previous benchmark parcel dataset submissions. It is our vision that the newly implemented GCS suite of software will allow us to export and create a searchable format standard parcel layer with a minimum amount of hands on manipulation that we have done in the past. Although the export process has improved using this functionality, there are still some aspects of this GCS export process that need to be improved.

### Standards

- Wisconsin Department of Revenue [Property Assessment Manual \(2021 WPAM\)](#) and attendant DOR and DOA 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

- Although not actually a layer, Dunn County residents and tradespersons can now access, review and retrieve sanitation, zoning and other permits through the GCS Permit Tracking (PT) module of our public web interface. Scanned documents in the process of being added to this system throughout the summer of 2021.

#### Custodian

- Dunn County Environmental Services Department (Surveying, Zoning, Land Conservation and Solid Waste.)

#### Maintenance

- The Dunn County Environmental Services Department will continue to issue, and administer, the permitting processes within their divisions. Their work process has now changed to include this GCS integration into the land records management system. Scanning and assigning those scanned documents to the permits will be part of the process once that project is completed.

Dunn County WI Web Portal

Click on the appropriate tab to search for Land Records data. The Parcel Tab allows you to search for Parcel Records and the Permit Tab for Permits. Next, enter your search criteria and

Search By: Property Permit Reset Search | Hide Search

Permit	Reference Name
Issue # <input style="width: 100%;" type="text"/>	Last Name <input style="width: 100%;" type="text"/>
Dept. <input style="width: 100%;" type="text" value="Planning &amp; Zoning Division"/>	First Name <input style="width: 100%;" type="text"/>
App. Type <input style="width: 100%;" type="text" value="All"/>	
App. # <input style="width: 100%;" type="text"/>	
Year <input style="width: 100%;" type="text"/>	
<span style="border: 1px solid black; padding: 5px 15px; background-color: #0056b3; color: white;">Search For Permits</span>	

Search powered by **GCS**

Version 1.28.1.0  
 Copyright © 2008-2018  
 Request for Proposals  
 List & Label @ Version 1.0  
 Copyright combase GmbH

### Standards

- Permitting standards as dictated by local, state and federal ordinances and policies.

## ROD Real Estate Document Indexing and Imaging

### Layer Status

- **Grantor/Grantee Index:**  
The Grantor/Grantee index is available online beginning in 1978.
- **Tract Index:**  
A computerized tract search is available beginning January 1, 2000. The manual tract indexes are available online as well. All documents are indexed using a PLSS based system. In 2019, the PIN # was added as a searchable field on conveyance documents by indexing the PIN #s from the electronic real estate transfer return.
- **Imaging:**  
Dunn County continues to digitize and permanently store every document recorded. Document images, including Plats and CSMs are available by Volume/Page # and/or Document # starting with the first recorded document in 1857.
- **ROD Software/App and Vendor Name:** : Land records software provided by Fidar Technologies. AVID is the receipting/recording software. Laredo and Tapestry are utilized for searching.
- Custodian  
County Register of Deeds
- Maintenance  
The Dunn County Register of Deeds Office is staffed with the Register of Deeds along with one full time Deputy Register of Deeds and two part time Deputy Register of Deeds.

### 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 Static

- **Most recent acquisition year:** 2019
- **Accuracy:** USGS Quality Level 2
- **Post spacing:** 0.7 meters
- **Contractor's standard, etc.:**
- **Next planned acquisition year:** None planned as of now, but LiDAR acquisition has been on a 10-15 year cycle depending on available grants, costs and needs.

### Custodian

- Dunn County Land Information Office

### Maintenance

- The data is static therefore there is no maintenance scheduled.

### Standards

- National Geospatial Program LiDAR based specification Version 1.2
- USGS Quality Level 2

## 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 Static

- All derivatives were flown in 2019 and delivered in 2020. These include 1 foot contours; Bare earth models; Breaklines; Culverts; Hydro enforced DEM; Hillshade; Intensity Images; and the Raster\_DEM

### Custodian

- Dunn County Land Information Office

### Maintenance

- Not required; Static dataset that is backed up on a regular basis

### Standards

- In conjunction with the USGS 3DEP LiDAR project as processed by Ayers Associates.
- National Geospatial Program LiDAR based specification Version 1.2
- USGS Quality Level 2

## Other Types of Elevation Data

### Layer Status Static

- 2 foot and 10 foot contour layers (derived from our 2007 LiDAR project) both in shapefile format and autocad (.dwg) format. Lines are 3D polylines with attributes.

### Custodian

- Dunn County Land Information Office

### Maintenance

- Not required, static dataset that is backed up on a regular basis

### Standards

- Mapping accuracy meets FEMA Appendix A Specifications for LIDAR Flood Plain Surveys with vertical accuracy standards of +/- 18.5 cm.

# Orthoimagery

## Orthoimagery

### Layer Status Static

- **Most recent acquisition year:** 2020
- **Resolution:** 0.5'  
**Contractor's standard:** Ayres Associates provided Dunn County, Wisconsin with digital, 4-band orthoimagery services in 2020 as part of WROC. The aerial imagery was collected on April 22nd, 24th, 25th, 26th and May 7th using a Microsoft Vexcel UltraCam Eagle sensor mounted in a fixed-wing aircraft. Aerial imagery was collected to support 0.5 foot ground sample distance (GSD) orthoimagery to meet ASPRS Class II horizontal accuracy specifications at 1" = 100' map scale. The 6-inch pixel orthoimagery was produced to meet or exceed a horizontal accuracy of 1.4 feet RMSE according to ASPRS Positional Accuracy Standards for Digital Geospatial Data.
- **Next planned acquisition year:** 2024

### Custodian

- Dunn County Land Information Office

### Maintenance

- This is a static dataset that is backed up on a regular basis

### Standards

- See contractor's standard section above

## Historic Orthoimagery

### Layer Status Static

- Dunn County keeps the following aerial photos on a backup server for unique and special instances. (Those marked with an asterisk (\*) are available to view on the GIS public web site.)
- 2017 6" spring leaf off color\*
- 2015 NAIP 1-meter color\*
- 2012 DNR fall 18" color photo\*
- 2007 6" color early summer leaf on photo\* (Dunn County procurement)
- 2004 12" black and white spring leaf off photo\* (Dunn County procurement)
- 2002 NDOP 1-meter black and white\*
- 1991 USGS 1 meter black and white photo\*

### Custodian

Dunn County Land Information Office

### Maintenance

These static datasets are backed up on a regular basis

### Standards

Standards vary for each individual photo

## Other Types of Imagery

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

### Layer Status

- None

### Custodian

- N/A

### Maintenance

- N/A

## Standards

- N/A

# Address Points and Street Centerlines

## Address Point Data

### Layer Status Maintenance Phase

- The land information office of Dunn County administers the rural addressing program for the County. The GIS portion of this address work consists of maintaining a point file feature class associated with the geodatabase used to drive the E911 mapping and dispatch center data. Currently containing 18,124 unique address points, this feature set also includes the physical addresses for 7 Villages (Colfax, Knapp, Ridgeland, Wheeler, Boyceville, Downing and Elk Mound) and 1 City (Menomonie.) Currently, there is not a good line of communication between the Villages and the land information office in regards to address maintenance. The current points were derived from the GIS parcel layer, extracted as a centroid of the parcel, and then attributed with the physical address of record. This global centroid creation was done around year 2007, and the point file has been maintained and updated ever since. In the winter of 2018, land information staff made a concerted effort to place the address point within the parcel it belongs to, while representing the point of access as best we could. Once this was completed, we did a spatial join owner name upgrade on the entire dataset. This was a much needed update, as the owners had not been updated since that initial 2007 push. The City of Menomonie has been more cooperative in providing corrections to the existing database, as well as providing addressing schemas for the new subdivision lots created within the City limits. These site addresses are also entered into the GCS land records management system, and linked to the appropriate parcel as a physical address. (not necessarily the mailing address, which is a separate table.)

### Custodian

- Dunn County Land Information Office

### Maintenance

- Inherited from the Dunn County Zoning Office in January of 2010, the Dunn County rural address program has grown and evolved along with the new technology that becomes available. Currently a rural address applicant has a variety of ways to submit and apply for a rural address (also referred to as a fire number.) 95% of our new applicants complete the required form, and make payment, online. The applicant can read through the informational content and become informed as to the history, process and importance of the rural addressing program. The availability to complete an on-line application allows the applicant to complete the process from a remote computer and supply the appropriate payment with a convenient credit card process. The applicant can also download the application form, use postal mail and include a personal check or cash payment as they prefer. We also encourage the applicant to visit our office for a more personal experience. Once the application is received, it is vetted, approved and the number is assigned, the new information can now be updated to the GCS land records management system as well as the aforementioned address feature dataset with the E911 GIS mapping. The new address signs are ordered, and within about a month the delivered signs will be available for pick up and self-installation by the applicant and/or their representative. An 8' steel post and the mounting hardware are included in the \$75.00 fee for a new sign. Replacement signs can also be ordered, the same way, for a \$30.00 fee. In 2017 we offered the \$50.00 buy up option of having county staff install the sign.

### Standards

- Chapter 23 uniform system for numbering properties and principal buildings in Dunn County. adopted in September of 2009.

- Currently we use ESRI address locators that integrate into the E911 Zuercher dispatching system.
- The County does plan to integrate the adopted statewide standard, NG9-1-1 GIS Data Model, and has received the report back from the initial data submission study group.

## Building Footprints

### Layer Status

- Dunn County does not have a building footprints layer.

### Custodian

- NA

### Maintenance

- NA

### Standards

- NA

## Other Types of Address Information

### e.g., Address Ranges

#### Layer Status

- For Dunn County, this ranging topic would be covered in the next section “Street Centerlines”

#### Custodian

- NA

#### Maintenance

- NA

#### Standards

- NA

## Street Centerlines

### Layer Status Maintenance Phase

- The Dunn County centerline layer is also a product of the E911 mapping project geodatabase. Dunn County GIS staff does maintain this centerline dataset.

### Custodian

- Dunn County Land Information Office

### Maintenance

- Centerline layer is maintained on an as needed basis. Reasons for updating may including new subdivisions/platting; recent road reconstruction projects; error correction from previous versions; address “to-from” ranging adjustments as request by the E911 department; general topological cleanup based on new photography or other more accurate sources.

### Standards

- Chapter 23 uniform system for numbering properties and principal buildings in Dunn County. adopted in September of 2009 drives the “to-from” ranges based on a grid system implemented in the early 1990’s.
- Currently we use ESRI address locators that integrate into the E911 Zuercher dispatching system. This centerline data is also part of the E911 dispatching model.
- The County does plan to integrate the adopted statewide address model, as well as the NG9-1-1 GIS Data Model as time permits. Dunn County has participated in the recent activity related to standardization of centerline data across the State of Wisconsin.

## Rights of Way

### Layer Status **50% complete**

#### How Maintained:

- We have much work to do on the Dunn County right of way layer. When we contracted out our parcel mapping in the early 2000's, the consulting mappers, did not do an adequate job of delineating the right of way boundaries. Road widths were estimated, fee title rights of way were ignored, plats and surveyed private roads were overlooked, so in the end we have a very inconsistent and inaccurate representation of the road rights of way in our county. The polygon representing the road right of way limits will usually have the owner as "State of Wisconsin", "Dunn County", "Town of Red Cedar" and so on. A large percentage of these right of way polygons have no PIN assigned to them, thereby given a "null" return in the GIS parcel layer and database. As time has passed, and the parcel mapping has moved "in house", if there is an evident error or omission noticed by the GIS tech or LIO, the area will be re-mapped and the proper procedures will be followed to reconstruct the rights of way boundaries in those certain area. (LIO note: This status remains very close to what we wrote in the 2019-2021 modernization plan. Although we have tackled some of the more obvious problems with our right of way layer, we do not have an organized project in place to allocate and mandate staff time and resources to complete this task. It is our goal, in this next 3-year plan to make a dedicated effort to work on this troublesome and rather elusive problem. See Project #7.)

#### Custodian

- The Land Information office responsibilities include continual editing and updating of the County's digital base layers, associated databases, and metadata for all of the datasets that are offered for public and internal use.

#### Maintenance

- The land information office staff will set this right of way parcel cleanup as a priority for the next 3 years. It has come to our attention, through the County Surveyor's office and the Dunn County highway department, that there are some older county road projects that were never processed through the real property listers office, in other words, the right of way that was obtained in fee title, was never listed. We will set the county highways as a top priority as there may be other unidentified situations that occur, where there are plats and recorded documents that we can use to help guide us along the re-mapping of these rights of way. Town roads may not be as critical, as most of the ownership goes to the centerline along these designated roads. Federal and State highways will also be scrutinized to assess the correctness of our current parcel mapping.

#### Standards

- No specific standards on this layer

## Trails

### e.g., **Recreational Trails, Snowmobile Trails**

#### Layer Status **Maintenance Phase**

- The DNR trails in Dunn County (Red Cedar, Chippewa River, Stokke and Hoffman Hills Trails) are mapped and attributed (Mile marker posts) as part of the Dunn County transportation layer described above.
- As a recent and maintained update to the E911 mapping system, a county ATV layer was added as an overlay to the transportation layer. This ATV layer only includes those portions of public roads as designated for use by ATV's. Once departed from the public road, there is no formal mapping for the off-road trail system.

- The Dunn County Land Conservation Division, in collaboration with area snowmobile associations, also maintain a snowmobile layer that changes often throughout each snowmobiling season.

#### **Custodian**

- Recreational & ATV Trails - Dunn County Land Information Office (we also rely on the Dunn County Highway Department to alert us when a resolution is proposed that adds ATV travel rights across public roads.)
- Snowmobile Trails – Dunn County Land Conservation, with the support of the Land Information Office

#### **Maintenance**

- GIS/LIO staff maintains this layer. These trails do not change significantly over the course of time, so there is not a lot of maintenance needed here. If any new trails are added, they will be updated on the transportation layer as needed.

#### **Standards**

- No specific standards on this layer

## **Land Use**

### **Current Land Use**

#### **Layer Status Static**

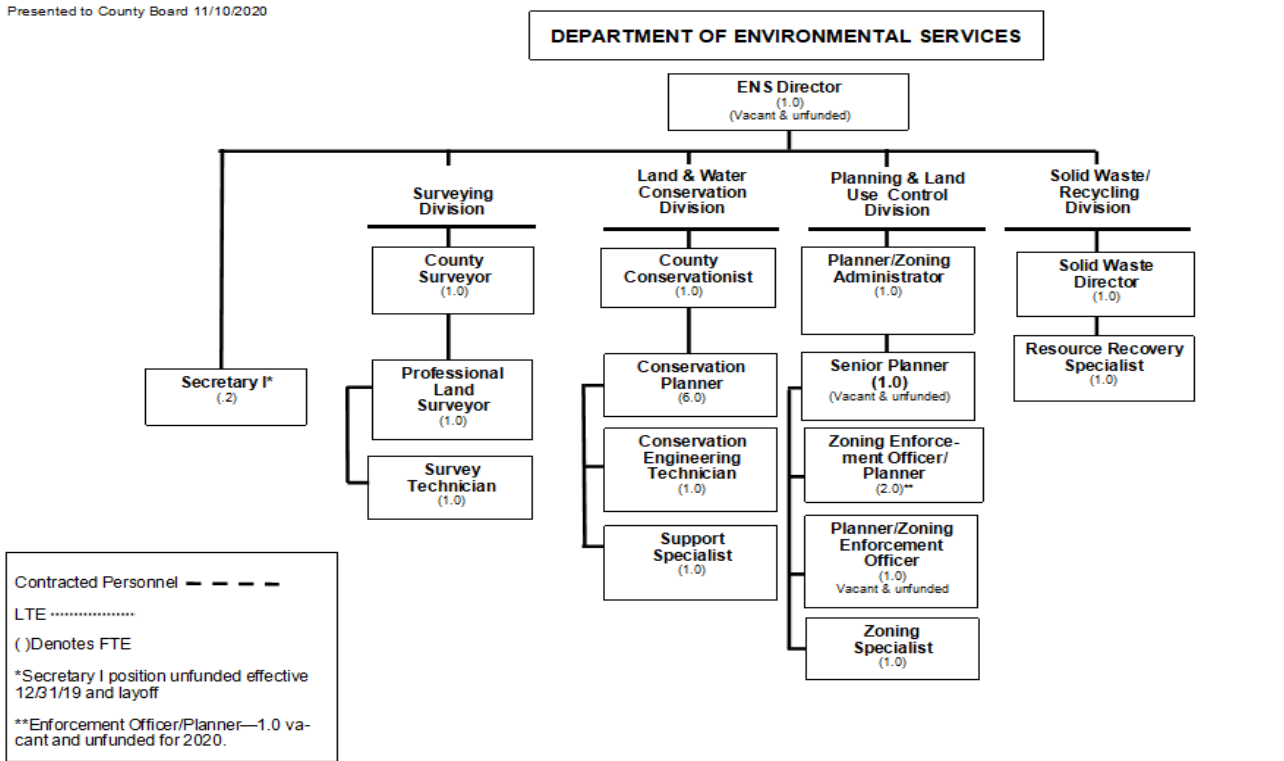
- Most often used land use layers are usually obtained from different sources, outside of the land information office. An example would be the Wiscland1 land cover maps available through the Wisconsin DNR. Normally the land information office doesn't participate in the local Township, Village and/or City planning processes. Those local municipalities, however, may reach out to other departments within the County to provide them with experienced guidance and the expertise needed to conduct a variety of land use activities. Some examples would include groundwater guardianship, concentrated animal feeding operations (CAFO) and broadband mapping, just to name a few. The Dunn County Land Information Office serves as a technical resource to any number of outside departments when these unique, but important, projects arise.

#### **Custodian**

- Although we allow these rather large "outside" datasets to be stored on our network servers, it is not up to the County to maintain datasets derived from an outside source.

#### **Maintenance**

- The zoning/planning offices, as well as the land conservation office, both have proficient and experienced GIS users on staff. These staff create, maintain and distribute geospatial data and maps, as determined by their individual disciplines, and their user's unique needs. This may include farmland preservation mapping, zoning/planning and density analysis, clean water, and water resources management just to name a few. It is imperative that these separate offices, being land information, and environmental services, become more of a cooperative unit within the land records framework of Dunn County. (See org chart below)



### Standards

- No County standards on datasets retrieved from outside sources. Normally these DNR, or other, datasets provide the metadata for that feature class. There may also be errors and omissions disclaimers when using outside data that need to be adhered to.

## Future Land Use

### Layer Status Static

- As mentioned above, participating Townships generally coordinate with the environmental services office for assistance with future use planning and mapping. Currently 16 of the 22 political townships in Dunn County are participants in the county zoning program. The other 6 are considered “un-zoned” townships and may, or may not, have their own planning and subdivision ordinances in place. The environmental services office, including the branch of Land Conservation, works, on a case by case basis, with each of these participating townships as needed. Often, a key driving component for these land use planning activities, is a current and up to date parcel layer. The land information office works with, and provides support to, the environmental services office as requested.

### Custodian

- The Land Conservation office responsibilities include designing and installing soil erosion control and water quality practices for agricultural, commercial, and recreational development, and developing land and resource management plans. The office maintains the agricultural planning and management records, farmland preservation participation, and the soil survey in cooperation with NRCS.
- The Planning/Zoning office responsibilities include maintaining and enforcing the county’s comprehensive zoning ordinance for 16 of the 22 townships in the county and sanitary and

private sewage system ordinances. This section is also entrusted to assist the constituents of Dunn County with directional planning and development advice as needed.

- (Also see the Surveying custodian duties in the PLSS section of this document.)

### Maintenance

- Any dataset, and maps, that are created through an unique project as mentioned above, will be organized and stored/archived on the Dunn County server network. It is up to the individual departments, or individuals, who created the data, to decide who will maintain it. We have stressed to these users that they should also create a metadata set to accompany the feature datasets.

### Standards

- s. 66.1001, Wis. Stats. Comprehensive planning.
- Future land use maps are typically created through a community's comprehensive planning process.  
If a future land use map is created as part of an adopted comprehensive plan(s), then it can be assumed to meet the standards in s. 66.1001  
According to s. 66.1001, beginning on January 1, 2010, if a town, village, city, or county enacts or amends an official mapping, subdivision, or zoning ordinance, the enactment or amendment ordinance must be consistent with that community's comprehensive plan.  
Future land use mapping for a county may be a patchwork of maps from comprehensive plans adopted by municipalities and the county.

## Zoning

### County General Zoning

Layer Status

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

- As a rule, the parcel fabric maintained by the land information office is the driving base layer behind the zoning map. More specifically, a zoning code is assigned to a parcel, within the land records management system, and then this code is used to create maps, do planning analysis and other GIS functions based on that designated zoning code criteria.

### Custodian

- There are 2 custodians at this time. The land information office and the zoning office. Both of these departments have editing rights to make corrections, changes, edits, and/or updates to the zoning code on any given parcel. It is preferable that the zoning office do the majority of these zoning edits and changes. Currently the only zoning edits the land information office is making, is when a zoned parcel is split into 2 or more children parcels. The parent zoning is usually carried over to the children parcels. Any merging of parcels may need guidance from the zoning office staff if 2, or more, different zoning designations are being combined.

### Maintenance

- Again, it is preferable business practice to have the Dunn County zoning office take complete ownership of this field. As mentioned, the property lister, GIS tech and/or the LIO will carry previous zoning codes over when splits/combines occur.

### Standards

- Please refer to the Dunn County comprehensive zoning ordinance (Chapter 13) available on the main Dunn County web page

## Shoreland Zoning

### Layer Status **No layer (Use parcel layer and buffering tools)**

- Administered by county but not in GIS format.

### Custodian

- It is preferable business practice to have the Dunn County zoning office take complete ownership of this zoning designation and the enforcement of it.

### Maintenance

- No digital data is available for this zoning designation. The Dunn County zoning office staff rely on the older USGS quadrangle maps to determine if shoreland zoning is present. These raster datasets are backed up on a regular basis and are easily obtained.

### Standards

- Please review the Shoreland Protection Ordinance (Chapter 14) available on the main Dunn County web page

## Farmland Preservation Zoning

### Layer Status

- Administered by county land conservation department, but not in GIS format. Note: the municipalities within Dunn County that fall under this designation are Townships of Grant, Lucas and Wilson. Also this mapping is available through the Wisconsin DATCP website (<https://datcpgis.wi.gov/maps/?viewer=fpp>)
- **Year of certification:** Varies by Township (Usually 2016 or 2017.)Custodian

### Custodian

- It is preferable business practice to have the Dunn County land conservation department take complete ownership of this program and the enforcement of it.

### Maintenance

- Data on the countywide servers are backed up on a routine basis.

### Standards

- Wisconsin State Statute Chapter 91 (Farmland Preservation)

## Floodplain Zoning

### Layer Status **Static**

- 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.
- FEMA Flood Insurance Rate Maps (FIRMs) can be changed through "Letters of Maps Change," which is comprised of a few things: Letters of Map Amendment, Letters of Map Revision, and Letters of Map Revision Based on Fill. These are documents issued by FEMA that officially remove a property and/or structure from the floodplain. They are collectively called Letters of Map Change.

### Custodian

- Dunn County Zoning Office (Enforcement and administration of this layer)

### Maintenance

- As determinations are completed and approved by FEMA and/or WDNR standards.

- Enforcement and administration of this section is through the Dunn County Zoning Office. See chapter 15, "Dunn County Floodplain Ordinance" for specific details.
- **OFFICIAL MAPS & REVISIONS**  
The boundaries of all floodplain districts are designated as floodplains or A-Zones on the maps listed below and the revisions in the Dunn County Floodplain Appendix. Any change to the base flood elevations (BFE) in the Flood Insurance Study (FIS) or on the Flood Insurance Rate Map (FIRM) must be reviewed and approved by the DNR and FEMA before it is effective. No changes to regional flood elevations (RFE's) on non-FEMA maps shall be effective until approved by the DNR. These maps and revisions are on file in the office of the Dunn County Zoning Administrator, Dunn County, WI. If more than one map or revision is referenced, the most restrictive information shall apply.

#### **Standards**

- FEMA standards, Wisconsin DNR regulations and Dunn County Zoning Ordinance number 15 (Dunn County Floodplain Ordinance.)

## **Airport Protection**

### **Layer Status Static**

- The County does maintain (in conjunction with the City of Menomonie) a GIS representation of airport protection zoning boundaries
- **Airport protection zoning map depicts:**
  - Height limitation restrictions (City would enforce their interests, and the County would review those potential inclusions into this zone(s) that fall outside of the City limits. (Note: extraterritorial zoning also applies 1.5 miles beyond the City limits so there may be some approving and objecting authority given those criteria.)
  - General zoning overlay for airport protection (City would enforce their interests, and the County would review those potential inclusions into this zone(s) that fall outside of the City limits. (Note: extraterritorial zoning also applies 1.5 miles beyond the City limits so there may be some approving and objecting authority given those criteria.)
  - Other: Airport protection boundary falls into 4 different jurisdictions; City of Menomonie (actual airport and runways are in the City limits;) Town of Menomonie, Town of Red Cedar and a small portion of the Town of Spring Brook.

### **Custodian**

- The City of Menomonie along with the County of Dunn if required.

### **Maintenance**

- The layer is static and is not usually updated. The City of Menomonie maintains this layer and the County has acquired a copy to review and protect those interests outside of the City limits.

### **Standards**

- FAA, City Zoning and County Zoning

## **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**

- Dunn County Zoning Office and the Land Information Office maintains the zoning information, mapping, and per parcel designation, for 22 Townships (6 Townships are unzoned) and the City of Menomonie. The 7 Villages within our county limits are responsible for their own

zoning. Before 2010, some of these Villages had their zoning codes updated in the land records management system, but this department no longer updates or maintains these codes.

#### Custodian

- Dunn County Zoning office, along with the Dunn County Land Information Office.

#### Maintenance

- There are 2 custodians at this time. The land information office and the zoning office. Both of these departments have editing rights to make corrections, changes, edits, and/or updates to the zoning code on any given parcel. It is preferable that the zoning office do the majority of these zoning edits and changes. Currently the only zoning edits the land information office is making, is when a zoned parcel is split into 2 or more children parcels. The parent zoning is usually carried over to the children parcels. Any merging of parcels may need guidance from the zoning office if 2, or more, different zoning designations are being combined.

#### Standards

- Please review the Dunn County comprehensive zoning ordinance (Chapter 13) available on the main Dunn County web page. The City of Menomonie and each Village may have their own standards for zoning.

## Administrative Boundaries

### Civil Division Boundaries

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

#### Layer Status Maintenance Phase

- Dunn County has 100% completion of the 22 Township, 7 Villages and 1 City municipal boundary layers. This is the framework for our election boundaries as described below.

#### Custodian

- Dunn County Land Information Office

#### Maintenance

- May be updated when annexations occur, or better geospatial data (PLSS) is available.

#### Standards

- Boundaries are mostly determined using a combination of PLSS data and existing parcel data. There are no formal standards adhered to on this layer.

### School Districts

#### Layer Status Maintenance Phase

- **Progress toward completion/maintenance phase:** It is estimated that we are at 95% completion on this layer.
- **Relation to parcels:** Layer is derived using a combination of the municipal layers and the parcel layer attribute as noted below.
- **Attributes linked to parcels:** "School District Number" and "School District" are the 2 associated fields used on the V7 submission. The school district number is the state code assigned to that jurisdiction, and then an alpha type designation is cross referenced. (e.g. School District Number = 1176; School District = COLFAX SCHOOL DISTRICT.)

#### Custodian

- Dunn County Land Information Office

## Maintenance

- Ongoing. It is our hope that the State Department of Public Instruction would someday be able to provide our county with a map that they believe is accurate, and assist us with any imperfections that may exist in this layer.

## Standards

- We do not conform to any standards related to this layer other than using the State provided school code that matches the school district that has been designated for this parcel. Occasionally we consult with an individual school district official when a unique issue or problem occur.

## Election Boundaries

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

### Layer Status Maintenance Phase

- The County does manage a GIS representation of the municipal wards and polling locations

### Custodian

- The Dunn County Land Information Office (in conjunction with the County Clerk's office as well as any individual local municipal office that may notice inconsistencies in our election boundary mapping.)

## Maintenance

- Somewhat dynamic layer especially when annexation and re-districting situations occur. The local municipal, and county clerks as well as the State Legislative Technology Bureau and the Wisconsin Elections Commission staff are very helpful in identifying issues, then working with our department to offer solutions to those problems.

## Standards

- Municipal Wards: Legislative Technology Services Bureau data model
- Polling locations are an internal point layer that we maintain for informational purposes

## Utility Districts

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

### Layer Status

- Dunn County does not have utility district layers available at this time

## Emergency Service Boundary-Law/Fire/EMS

### Layer Status Law Enforcement is in Maintenance Phase

- The County does manage a GIS representation of a law enforcement layer
- Several, unique, emergency district and dispatching layers are maintained within the E911 and computer aided dispatch (CAD) systems. These layers include the emergency service layer (ESN), an individual response layer (IRA) and an overall district boundary layer (zip code) that help suggest a predetermined dispatch scenario for any given incident within the County limits. These layers were created in 2007, when Dunn County made the conversion to digital dispatch and mapping. Although mostly static, there are times when these boundaries are modified. Examples of this would be when annexations occur, or when abutting emergency service boundaries are modified. The layers are built in to the Zuercher GIS mapping system and are edited and updated as requested by the E911 director.

### Layer Status Fire is in Maintenance Phase

- The County does manage a GIS representation of a jurisdictional fire boundary layer
- The land information office maintains the Emergency Fire jurisdictional boundary layer based on data provided by the individual fire departments as well as the E911 director. The layers are

built in to the Zuercher GIS mapping system and are edited and updated as requested by the E911 director in coordination with said individual fire departments.

#### **Layer Status EMS is in Maintenance Phase**

- The County does manage a GIS representation of a jurisdictional EMS boundary layer
- The land information office maintains the Emergency Medical Services jurisdictional boundary layer based on data provided by the individual ambulance services, the individual fire departments as well as the E911 director. The layers are built in to the Zuercher GIS mapping system and are edited and updated as requested by the E911 director in coordination with said individual fire departments.

#### **Custodian**

- The Dunn County E911 mapping is maintained by the Dunn County Land Information Office, as suggested by the E911 director.

#### **Maintenance**

- Occasionally the E911 director will suggest an edit, or notice an inconsistency with the mapping data. We will meet with those folks and devise a solution and/or strategy to update the mapping as suggested. The updates are then pushed out to the E911 center by the I.T. staff.

#### **Standards**

- There are no standards that drive the accuracy of this data.

### **Public Safety Answering Points (PSAP) Boundary**

#### **Layer Status Maintenance Phase**

- The County does manage a GIS representation of the PSAP. It is the same as/coincident with the county boundary.

#### **Custodian**

- The Dunn County Land Information Office maintains the county boundary layer.

#### **Maintenance**

- Part of most every GIS dataset and available from a host of sources.

#### **Standards**

- A PLSS accurate cadastral-based county boundary is desirable and preferred.

### **Provisioning Boundary**

#### **Layer Status Not administered by Dunn County.**

- The County does not currently have a dedicated provisioning boundary to deal with gaps, overlaps and discrepancies in cross-jurisdictional PSAPs. These would primarily be on the outside county border with adjoining counties including; Barron, St. Croix, Chippewa, Eau Claire, Pepin, Pierce, and Polk.

#### **Custodian**

- No provisioning boundary layer exists as of this date.

#### **Maintenance**

- No provisioning boundary layer exists as of this date.

#### **Standards**

- Wisconsin GIS NG9-1-1 Data Standard (Provisioning Boundary)

## Other Public Safety e.g. Healthcare Facilities

### Layer Status **update**

- Currently working on these layers

### Custodian

- Land information Office in conjunction with E911.

### Maintenance

- Land Information Office

### Standards

- none

## Lake Districts

### Layer Status

- Although Dunn County has 1 lake district (Elk Lake District) we do not maintain a GIS layer for this information.

## Native American Lands

### Layer Status

- Dunn County does not have a Native American GIS layer

## Other Administrative Districts

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

### Layer Status **Maintenance Phase**

- Dunn County has recently worked on a "County owned" parcel layer as well as a comprehensive parks and recreation layer. (This parks and rec layer was migrated to an ESRI ArcGIS Online application and is available through the home page of Dunn County's main website.)

### Custodian

- Dunn County Land Information Office

### Maintenance

- Dunn County Land Information Office will update these layers as needed

### Standards

- There are no specific standards for these datasets

## 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 **Maintenance Phase**

- The County does manage a GIS representation of the hydrography (polygon for lakes and larger river bodies, and a polyline for streams and narrow rivers.)

### **Custodian**

- Dunn County Land Information Office

### **Maintenance**

- Dunn County Land Information Office will update these layers as needed

### **Standards**

- There are no specific standards for these datasets

## **Cell Phone Towers**

### **Layer Status Maintenance Phase**

- The County does manage a GIS representation of the wireless cell tower locations

### **Custodian**

- Dunn County Land Information Office

### **Maintenance**

- Dunn County Land Information Office will update this layer as needed

### **Standards**

- There are no specific standards for this dataset

## **Bridges and Culverts**

### **Layer Status Maintenance Phase**

- The County does manage a GIS representation of culverts. Delivered as part of the 2019 LiDAR derivative data acquired by Dunn County.

### **Custodian**

- Dunn County Land Information Office as well as the Dunn County Highway Department.

### **Maintenance**

- The Dunn County Highway Department and/or the Dunn County Land Information Office will update this layer as needed

### **Standards**

- There are no specific standards for this dataset

## **Other**

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

### **Layer Status Maintenance Phase**

- Dunn County does maintain GIS representations of the following layers: Public boat landings; Cemeteries, Points of Interest, Mile marker posts (I94 and US Hwy 12/29), Platted subdivisions, Zip code, PLSS corners, PLSS framework (Town, Range, Section, Quarter, Quarter-Quarter, Gov Lot), Supervisory districts, Depth to ground water, Ground water recharge, Water table elevation, 1, 2 and 10 foot contours, Bedrock geology and Depth to bedrock. (Note: these layer can be viewed through the Dunn County WebGUIDE Xtreme GIS public portal.)

### **Custodian**

- Dunn County Land Information Office

### **Maintenance**

- Dunn County Land Information Office will update these layers as needed

**Standards**

- Standards will vary for each individual dataset. Mostly these were generated in house using any number of geospatial creation methods.

# 3 LAND INFORMATION SYSTEM

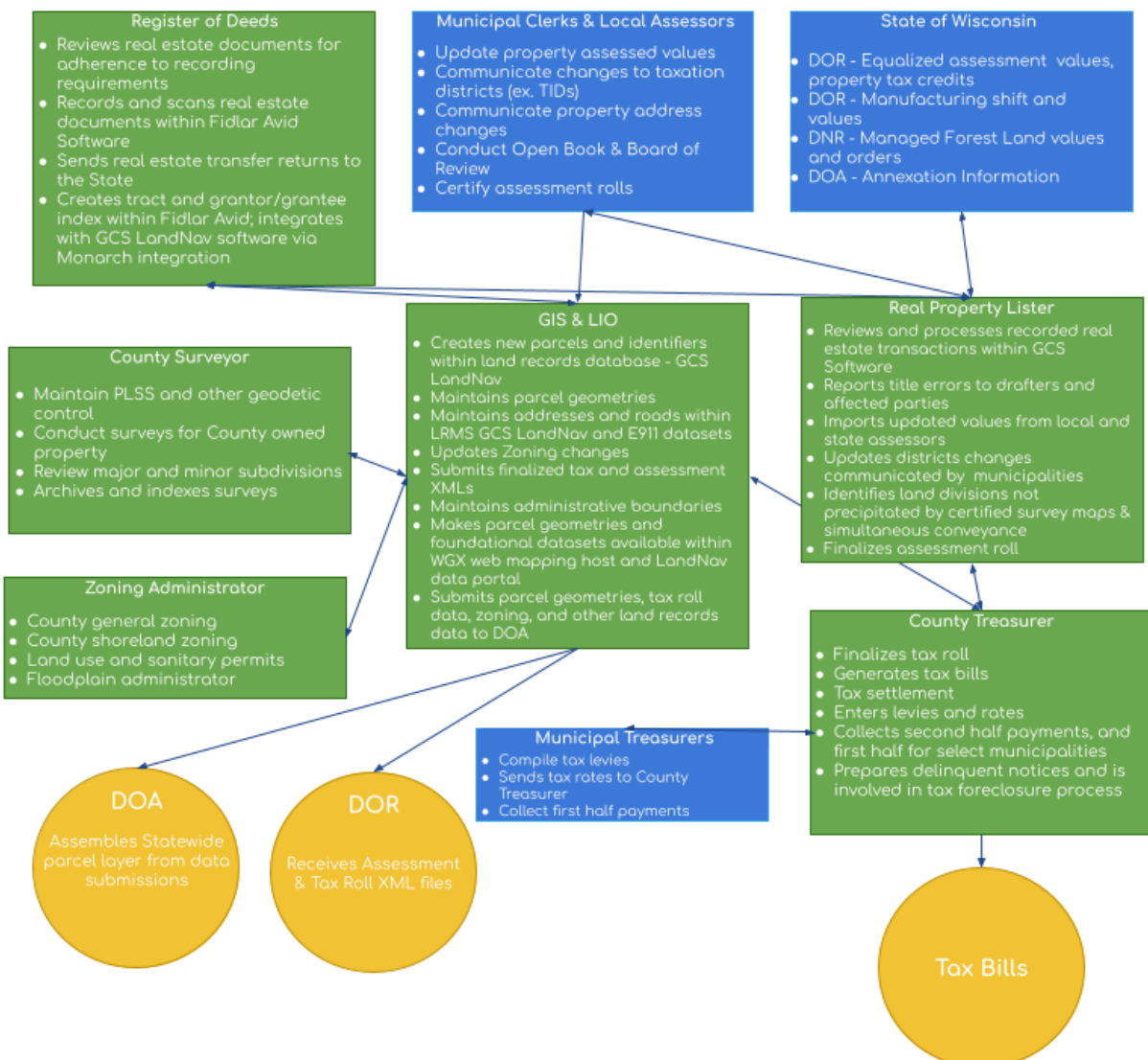
The WLIP seeks to enable land information systems that are both modernized and integrated. Integration entails the coordination of land records to ensure that land information can be shared, distributed, and used within and between government at all levels, the private sector, and citizens.

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.

## 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

- Dunn County uses state-of-the-art hyper-converged host servers using VMware vSphere 6.7 (vCenter) for Virtual Machine Management and vSphere 6.7 and Microsoft Server 2012 R2, 2016, and 2019 to maintain all application and database systems and uses Microsoft SQL Server 2012, 2014, and 2015 for all internal database applications county-wide. Dunn County utilizes Information Technology Infrastructure Library (ITIL) and PMI PMBOK project management, planning standards, and methodologies. Gant charts are produced for project timelines. Dunn County utilized ITIL's operations, capacity planning, and change management methodologies for implementing and maintaining all Information Technology systems and follows best practices and industry standards for securing the County's infrastructure including AD Domain, strong password protection, firewalls, virus, malware, and spam filtering for all incoming data, intrusion detection, etc. to actively protect all the County's informational assets. For GIS-based projects, ESRI metadata (see below) and data modeling are developed and maintained for digital base layers and associated databases.

### Software

- Dunn County uses various levels of ESRI GIS products for managing spatial land assets. The County is entered in to an enterprise license agreement (ELA) which gives us an unlimited amount of options to provide desktop, and on line, mapping functionality to our users. (The necessity for this ELA has been under analysis to see if it is the most cost effective license for a county of our size. Individual licensing and concurrent licensing has been suggested as a more fiscally practical solution in light of some very tight budgets.)
- The County manages land records documents using Fidlar Technologies products.
  - a. Avid land records management software is used by County staff to process, index, search documents, and for office accounting.
  - b. Laredo land records document search engine is a subscription service for online document searches and obtainment by the public.
  - c. Tapestry land records document search is a pay as you go service for online document searches and obtainment by the public.
  - d. Monarch integration allows syncing of document processing through our GCS land records management database.
- The County utilizes GCS/LandNav Land Records Management software for managing property records for assessment, tax billing, and tax collection. The web portal allows public access to property tax, document records, and permit information via the internet.
- Dunn County surveyor staff and other selected departments have Carlson Survey 2019 installed at a desktop instance.
- Dunn County currently uses ArcGIS Pro: No (GIS Specialist. has access to ArcGIS Pro and uses it regularly.)
- Dunn County plans to upgrade to ArcGIS Pro: Yes by estimated date 1/1/2023

## Website Development/Hosting

- Dunn County contracts with Applied Data Consultants (ADC), 2985 58<sup>th</sup> St. Eau Claire, WI 54703, to host our land records data using their WebGUIDE Xtreme (WGX) product. Dynamic map data is updated as needed and static map data is also updated as needed.

## Metadata and Data Dictionary Practices

### Metadata Creation

- **Metadata creation and maintenance process:** Metadata creation maintenance and updating is a designated weak spot in the infrastructure of Dunn County's GIS. Currently, we are utilizing older FGDC metadata that was developed when our datasets were first created. The age of this metadata varies from 5-10 years old, dependent on the dataset. As we become more streamlined and organized within the land records department, we need to allow staff time for, and budget against, the development and maintenance of compliant metadata. Normal work flow would assume that we use the tools within ArcGIS and ESRI software(s) to develop and maintain these metadata datasets. Again, insufficient staff time and expertise is the biggest hurdle we face here.

### Metadata Software

- **Metadata software:** ArcCatalog is our main go to for creating, and maintaining 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:** When metadata is created, the standard fields will be populated as suggested through the ArcCatalog work flow process.
- Overview:
- Item Description: Title, Tags, Summary, Description, Credits, Use limitations, and
- Approximate Scale Range.
- Topics and Keywords: Topic Categories, Theme Keyword, Place Keywords, and
- Resource Citation: Titles, Presentation Form, and Dates created/published.
- Resource Citation Contacts: Contacts Manager.
- Contacts: Contact and Role.
- Maintenance: Update Frequency.
- Constraints: General Constraints.
- Resources:
- Details: Status and Credit.
- Extent: Description.
- Points of Contacts: Contact and Contact Information.
- Resources Maintenance: Update Frequency.
- Resource Constraints: General and Legal.
- Data Quality: Scope Level.
- Fields: Definition, Definition Source

### Metadata Policy

- **Metadata Policy:**
- Dunn County does not have a current metadata policy in place at this time.

## Municipal Data Integration Process

- The Dunn County land information tax assessment database (GCS/LandNav) is the main driver of our land records system. With over 36,300 parcels in 22 Townships, 7 Villages and 1 City, the interaction between each of these entities varies at any given time. The most rigorous interaction across these multi-jurisdictional districts occurs at the taxation level. The real property lister, in coordination with the land information office, and the County treasurer, works daily on the collaboration between each local municipality and their assessor(s) and official(s). The primary result, and most often used, derivative of this work is the countywide

GIS parcel, and the Dunn County tax portal database. This overreaching statement makes the assumption that the reader will realize that on any given day, a variety of phone calls, e-mails, walk in visits, and any other land records related situation may be presented to the land records staff. These are handled on a case by case basis and an excellent customer user experience is our end goal.

## 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
<a href="http://dunncowi.wgxtreme.com/">http://dunncowi.wgxtreme.com/</a>	None	<a href="https://dunnportal.co.dunn.wi.us/GCSWebPortal/search.aspx?">https://dunnportal.co.dunn.wi.us/GCSWebPortal/search.aspx?</a> <a href="https://www.co.dunn.wi.us/rpl">https://www.co.dunn.wi.us/rpl</a>	<a href="https://tapestry.fidlar.com/Tapestry2/Default.aspx">https://tapestry.fidlar.com/Tapestry2/Default.aspx</a> <a href="https://www.co.dunn.wi.us/rod">https://www.co.dunn.wi.us/rod</a>

#### Single Landing Page/Portal for All Land Records Data

##### URL

<http://www.co.dunn.wi.us/landinformation>

#### Web Services/REST End Points

##### URL

<http://dunncowi.wgxtreme.com/>

## Data Sharing

### Data Availability to Public

#### Data Sharing Policy

- Many of Dunn County's core data sets and foundational layers are available on the County's land records data sales section for a small transcription fee.
- Documents that are part of the Register of Deeds Tract Index are available for a cost through the ROD's online document purchasing application.
- Dunn County will work with educational institutions, non-profits, other municipal entities, and any other agencies deemed to be cooperating with Dunn County, and will offer them to sign a data sharing agreement that allows us to provide these geospatial datasets free of charge.

#### Open Records Compliance

- Any geospatial data created by the Dunn County Land Information Office is usually available through our on-line land records ordering process or through a data sharing agreement between parties. There may be a small (usually \$20.00) copy and transcript fee for some of these datasets. The cost for our native LiDAR data is higher, as there is more processing and data storage logistics involved.
- With the evolution of the WLIP Act 20 parcel mapping initiative, our office staff will usually advise the potential consumer to the availability of certain datasets, online, through the Statewide Parcel Map Initiative mapping portal and the Robinson Map Library.

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

#### Data Sharing Restrictions

- The only data sharing restriction would be for those individuals and/or agencies requesting free Dunn County geospatial data, that they would sign our data sharing agreement, if the requestor fits into that category. Any "for profit" group is asked to submit a land records order (fee) through our office, then, the data may be shared as they so choose.

#### Government-to-Government Data Sharing

- Dunn County's data sharing policy with other governmental agencies is one of a mutual agreement between entities. The County will work with any agency to provide digital data at no cost however; the county does ask if any new data is created it is offered back to the county, if applicable. (this is more of a general practice than an actual policy)

### Training and Education

- Dunn County utilizes the WLIP grant training remuneration to allow staff to attend the WLIA annual conference, The Wisconsin Society of Land Surveyors annual conference, the ESRI user's group annual conference, the Wisconsin Land Title Association training seminars, the Wisconsin Real Property Lister's Association conference and other miscellaneous training as needed. It is a priority for the land information office to keep up to date on the happenings within the State on both a political and technological stage. The land information section of the I.T. Division also budgets another line item for any upcoming training and education that will allow staff to train above the \$1000.00 provided by the WLIP.

# 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.

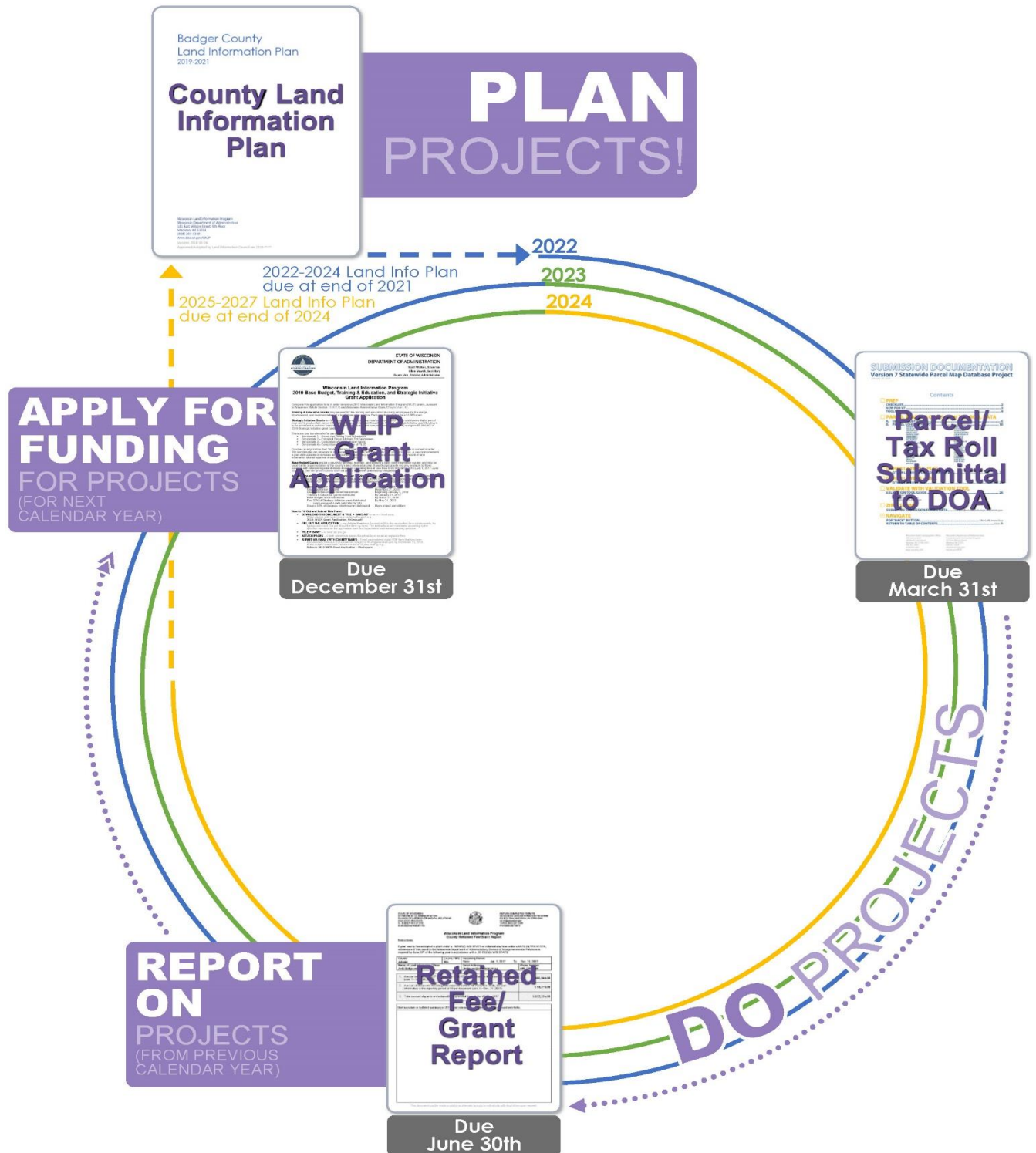


Figure 1. The WLIP Land Information Plan/Grant Project Cycle

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

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

#### Project Description/Goal

##### How Searchable Format Will Be Maintained (Maintenance Phase)

- Dunn County staff will closely follow the submission documentation that is delivered each year by the Wisconsin State Cartographer’s Office and the Department of Administration for the statewide parcel mapping project. Dunn County staff will utilize the observation reports that have been provided to us to help guide our data processes. Our vision is that the GCS/LandNav land information management software will allow us a tax roll extraction process that is effectively formatted to meet the criteria of the searchable format. This extracted land records data will then be joined to the county maintained parcel fabric using the common and unique PIN designation assigned to each individual parcel. All the supportive quality control tools that the SCO provides will be utilized to ensure a “clean” searchable format submission.
- The Dunn County Land Information Officer will certify that the parcel data meets the standards for Benchmark 1 and 2 upon submission of data.

#### 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.
- Dunn County will utilize the WLIP strategic initiative grant funding to offset the costs of this project. Some base budget money may be allocated to do normal parcel fabric maintenance on this dataset. (See Project #8.)

#### Objectives/Measure of Success

- The objective is to continue to meet the Searchable Format for Benchmarks 1 & 2 (Parcel and Zoning Data Submission, Extended Parcel Attribute Set Submission). The WLIP provides an observation report that indicates the success and/or failure of certain elements of this submission.

#### Project Timeframes

Timeline – Project Plan to Maintain Searchable Format		
**Example**		
Milestone	Duration	Date
Project start	–	January 1, 2022
Gather & format data	2 months	January -February, 2022
Project complete	–	March 31, 2022
Project start	–	January 1, 2023
Gather & format data	2 months	January -February, 2023
Project complete	–	March 31, 2023
Project start	–	January 1, 2024
Gather & format data	2 months	January -February, 2024
Project complete	–	March 31, 2024

## Responsible Parties

- Dunn County Land Information Office. Dunn County staff will utilize export tools provided by the GCS/LandNav Company.

## Estimated Budget Information

- See table at the end of this chapter for project budget information.

## Project Plan for PLSS (Benchmark 4)

### Project Title: Project Plan for PLSS (Benchmark 4)

#### Project Description/Goal

##### Planned Approach

- The Dunn County Surveyor's Office is actively underway remonumenting new corners and maintaining, and gathering GPS data on existing corners in Dunn County. Once a Township has been completed, those survey grade coordinates, and PLSS line work, are then made available to the Dunn County land information staff to integrate into the countywide parcel fabric. Since our parcel fabric was developed, prior to having 100% remonumentation completed, there are numerous inconsistencies and obvious problems with our parcel line work throughout the fabric. The Dunn County Surveyor's office has now provided GIS staff with 2 townships of fully remonumented PLSS section breakdown data in CAD format. Re-mapping the entire 36 sections within those townships, deed by deed, is now our goal. This is a large focus of where we are heading in the next 3 years. Any WLIP grant money used to fund this project, in this cycle, will be used towards the land information office staff integrating that part of the existing parcel fabric into this accurate PLSS framework. Note that this cadastral quality PLSS information is also invaluable for any number of small "hotspots" and specific cleanup work for an assortment of specific parcel line discrepancies that we are made aware of. The land information office continues to collaborate with the Dunn County surveyor's office as it pertains to this benchmark.
- The Dunn County Surveyor's office is fully staffed and budgeted with county levy monies to complete their ongoing portion of this project.

##### Current Status

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

##### Goals

- **Number of corners to be remonumented and/or rediscovered:** This is directly related to the schedule of the Dunn County Surveyor's office and their staff.
- **Number to have new coordinates established:** See PLSS Layer status in Chapter 2.
- **Accuracy class for these new coordinates:** Any newly set, or re-visited and GPS'd section corner will have a survey grade coordinate assigned to it.
- **Way in which these points will be integrated into the parcel fabric:** In 2019 the Dunn County Surveyor's Office provided land records (GIS) with a full township breakdown of PLSS line work including town and range lines, section lines and 1/16<sup>th</sup> (forty) lines and attributed dimensions. Although not fully migrated to the ESRI fabric platform yet, this CAD data then was imported into the existing framework of the Dunn County parcel layer and is now used as a guide to allow editing and "cleanup" of areas where noticeable and palpable errors and discrepancies were identified.

##### Missing Corner Notes

- **Documentation for any missing corner data:** The Dunn County Surveyor's office keeps a very detailed inventory of each PLSS corner in the county. If a missing corner is identified, thorough research is performed to see why this may be the case, or what the circumstances are related to this specific corner. This also holds true if there is a problem with the current corner at any given position. Certain logic that was used to re-set any PLSS corner may be analyzed by survey office staff, and if conditions, and field evidence, dictate it, these questionable corners may be re-justified

and re-set based on the overwhelming evidence obtained. (We refer to these situations a “double corners” and they create a unique circumstance as related to the parcel map. We deal with these on a case by case basis.)

### County Boundary Collaboration

- See PLSS Status table in Chapter 2. The Dunn County Surveyor’s office works with each abutting county surveyor when a boundary PLSS corner is being set and/or in dispute. Tie sheets are shared so that these common corners can be obtained by the general public from either county website.

### Business Drivers

- The Project Plan for PLSS is a requirement for those counties who utilize Strategic Initiative funds for work related to PLSS completion and integration.
- The Dunn County Surveyor’s Office staff (total of 3, County Surveyor, Professional Surveyor and Survey Technician) are fully financed by County levy funds. The Dunn County Land Information Office staff will be utilizing the WLIP grant mechanisms to supplement the PLSS integration into the parcel fabric.

### Objectives/Measure of Success

- The objective is to meet Benchmark 4 (Completion and Integration of PLSS) by 2029
- The beginning of the migration of the current survey grade PLSS into the parcel fabric will begin in 2019 and become integrated into the parcel mapping workflow throughout the next 3 year cycle.

### Project Timeframes

Timeline – Project Plan for PLSS (estimated)		
Milestone	Duration	Date
Project start	–	January 1, 2022
Internal County Staff to complete 100% full remon	8 years	January 1, 2019-January 1 2030
GIS/LIO cadastral parcel mapping off of new PLSS	8 years	January 1, 2019-January 1 2030
Project complete	–	February 1, 2030

### Responsible Parties

- The Dunn County Surveyor’s Office and the Dunn County Land Information Office staff.

### Estimated Budget Information

- See table at the end of this chapter.

## Project #1: Emergency Management Data Development

### Project Description/Goal

- In 2018, several essential emergency management geospatial datasets were examined and altered to support the transition to a new Computer Aided Dispatch (CAD) and law enforcement software platform, and to prepare for a future NG9-1-1 migration. The CAD and law enforcement software implementation was successful, however more work is needed to be NG9-1-1 ready including but not limited to:
  - Incorporate additional data elements within emergency management datasets to address new and legacy data elements.
  - Development of processes to conform site address and road centerline nomenclature to adopted statewide standard.

- Modify datasets to increase correlation between road centerline/address points and the MSAG & ALI datasets
- Consider development street alias table
- Collaborate with neighboring counties to ensure boundary accuracy
- Collaborate with municipal addressing jurisdictions to develop a more efficient workflow for maintaining municipal site address and road centerline alignment
- Consider developing an access point dataset. This is not a requirement for NG911, but helpful for responders
- **Land Info Spending Category:** Other (Emergency Management)

### Business Drivers

- Emergency management, planning, response preparedness, interoperability, and mitigation
- Community safety and expectation of accurate information
- Statewide NG911 Migration Efforts

### Objectives/Measure of Success

- To develop, maintain, and make available accurate County datasets and processes that support Emergency Management operations, and State NG911 requirements
- Update and expand metadata and maintenance documentation.
- Address each item identified within the Wisconsin Department of Military Affairs NG911 QC Assessment Report

### Project Timeframes

Timeline – Project #1 Emergency Management Data Development		
Milestone	Duration	Date
Project #1 start	–	January 1,2022
Modify and review data and processes. Collaborate with service providers establish implementation plan	ongoing	January 1,2022- December 31, 2024
Project # 1 complete	ongoing	December 31, 2024

### Responsible Parties

- Dunn County Land Information Office, Emergency Management, Information Technology
- The current core service provider and potentially outside contractors

### Estimated Budget Information

- See table at the end of this chapter.

## Project #2: Water Resources Data Updates & Development

### Project Description/Goal

- Create updated surface water hydrology datasets utilizing recently acquired LiDAR data and derivatives, aerial imagery, and reference data. If time and resources allow, Dunn County would also like to develop datasets helpful in managing and protecting water resources (karst features, mapping of sanitary systems, etc.)
- **Land Info Spending Category:** Other (Hydrography)

### Business Drivers

- Current hydrographic datasets are not representative
- Ongoing water quality efforts

## Objectives/Measure of Success

- Creation of updated surface water hydrography data
- New datasets made available to internal and external users.

## Project Timeframes

Timeline – Project #2 Water Resources Data Updates & Development		
Milestone	Duration	Date
Project #2 start	–	January 1,2023
Project complete	–	December 31,2024

## Responsible Parties

- Dunn County Land Information and Land & Water Conservation
- Contractors if deemed necessary to meet time or budget expectations

## Estimated Budget Information

- See table at the end of this chapter.

## Project #3: Continued Expansion of Web & Mobile Mapping Applications

### Project Description/Goal

- Dunn County has developed new web mapping and field collection tools as part of the 2019-2021 plan, however there continues to be a need for more applications and additional hardware. Dunn would like to develop and maintain applications for both internal and external users alike. Applications include but are not limited to:
  - Municipal address updates (to be shared with City & Village addressing authorities)
  - Water resources and quality
  - Data delivery
- **Land Info Spending Category:** Website Development / Hosting Services, Hardware

### Business Drivers

- Local government; Public interest, Environmental & Public Health, Land & Water Conservation, Emergency Management

## Objectives/Measure of Success

- Successful development and deployment of functional, robust, and user-friendly web applications to customers.

## Project Timeframes

Timeline – Project #3 Continued Expansion of Web & Mobile Mapping Applications		
Milestone	Duration	Date
Project #3 start	–	January 1, 2022
Project complete	–	December 31,2024

## Responsible Parties

- The Land Information Office is responsible for the successful implementation of these web and mobile tools. Depending on the application functionality needs, consulting services may be required as well.

## Estimated Budget Information

- See table at the end of this chapter.

## Project #4: Aerial Imagery Collection

### Project Description/Goal

- Dunn County collected aerial imagery through the WROC program in 2020 and intends to participate again in 2023 to maintain a regular aerial imagery update schedule as indicated in the 2019-2021 Modernization plan. Accurate and current aerial imagery is utilized and relied upon by a diverse group of both internal and external users. Based on customer feedback, Dunn County intends to collect leaf-off 6" resolution imagery, color. For this upcoming collection, we hope to partner with area municipalities as well.
- **Land Info Spending Category:** Orthoimagery

### Business Drivers

- Land Conservation, Planning & Zoning initiatives
- Support emergency management, forestry, and highway applications
- Accurate base map for parcel mapping and analysis.
- Public access to updated imagery
- Budgetary predictability

### Objectives/Measure of Success

- The objective is to regularly acquire and make available current and accurate aerial imagery. The success of this project will be measured through the timely delivery of 6" resolution imagery that is in alignment with the agreed upon imagery specifications between the vendor and the County.

### Project Timeframes

Timeline – Project #4 Aerial Imagery Collection		
Milestone	Duration	Date
Project #4 start	–	TBD-Spring 2023
Project complete	–	TBD-Fall 2023

- The project is anticipated to begin and end in 2023/2024 through participation in the WROC program, but may commence earlier depending on budget and potential funding partners.

### Responsible Parties

- The LIO, County land records staff, and selected acquisition partners, will complete this project through a regional imagery collection.

### Estimated Budget Information

- See table at the end of this chapter.

## Project #5: Development of Building Footprints Layer & Maintenance Plan

### Project Description/Goal

- Develop a building footprint polygon layer utilizing LiDAR data, aerial imagery, and reference records. A footprint dataset would support several efforts including planning, zoning, broadband expansion, emergency management, and damage assessment.
- **Land Info Spending Category:** Other Parcel Work

### Business Drivers

- Dunn County Planning & Zoning
- Emergency Management & damage assessment
- Broadband expansion efforts

### Objectives/Measure of Success

- The development of a building footprint layer and maintenance plan.

- To make the data available to both internal county staff and the public

## Project Timeframes

Timeline – Project #5 Development of Building Footprints Layer & Maintenance Plan		
Milestone	Duration	Date
Project #5 start	–	TBD-Fall 2022
Project complete	–	December 31,2024

## Responsible Parties

- Dunn County Land Information Office and potential contractor

## Estimated Budget Information

- See table at the end of this chapter.

## Project #6: Right-of-Way Development for Highways

- Progress has been made on mapping County Highway right of ways, as outlined in the 2018-2021 Modernization Plan; however, more work is needed to map county highway areas, as well as State and US roadways. Dunn County has identified that sometimes the parcel mapping conducted by contractors in past years for deeded rights-of-way do not accurately represent the descriptions etched out in the relevant plans and deeds. We have also identified some that are not represented at all. Beginning with County Highways, Dunn County would like to research, map, and in some cases incorporate the deeded roadways into the assessment database.
- **Land Info Spending Category:** Administrative Activities and Management

## Business Drivers

- Dunn County Highway Division, Planning & Zoning
- External land records professionals
- Parcel mapping accuracy

## Objectives/Measure of Success

- To create and identify and accurately map current rights-of-way

## Project Timeframes

Timeline – Project #6 Right-of-Way Development for County Highways		
Milestone	Duration	Date
Project #6 start	–	January 1, 2022
Project complete	–	December 31,2024

## Responsible Parties

- Dunn County Land Information Office staff and contractors if deemed necessary to meet time or budget targets

## Estimated Budget Information

- See table at the end of this chapter.

## Project #7: Training & Education

### Project Description/Goal

- Attend educational opportunities hosted by professional organization throughout the year (WLIA, WRPLA, WSLS, etc. )

- Acquire training specific to land records related software; an anticipated migration from our current ESRI ArcMAP desktop to ArcGIS Pro will require a plentiful amount of in house and formal training hours for all of our ESRI county users group.
- **Land Info Spending Category:** Training & Education

### Business Drivers

- Increase accuracy and availability of land records data.
- Prepare for software transitions, whether vendor or internally driven. (i.e. ArcGIS Pro, LRMS Service Provider upgrades)

### Objectives/Measure of Success

- Increased availability, and efficient access to land records data
- At least annual attendance to professional education opportunities

### Project Timeframes

Timeline – Training & Education		
Milestone	Duration	Date
Project #7 start	–	January 1, 2022
Project complete	–	ongoing

### Responsible Parties

- Dunn County Land Information
- Land Records Software Vendors (ESRI, LandNav, etc.)

### Estimated Budget Information

- See table at the end of this chapter.

## Project #8 : Editing for Parcel Fabric Accuracy and PLSS Line Work

### Project Description/Goal

- This involves the topological correctness and subsequent cleanup of both our current PLSS line work, as well as any inconsistencies, gaps, overlaps, omissions and other “housekeeping” type of edits related to our parcel fabric.

The current PLSS line work layer is a hybrid of Wisconsin DNR data, and some internal manipulation and matching of our current parcel layer. It is the intent of this project to utilize the survey accurate data available through Benchmark 4, and create correct section, forty and government lot line work that will be a better framework for our current parcel map. Although similar to the Benchmark parcel mapping work, this project allows us to fix, maintain and correct some of the day to day inconsistencies that are found throughout the year.

- **Land Info Spending Category:** Other Parcel Work and PLSS

### Business Drivers

- Any consumer of the Dunn County base PLSS and parcel layers
- Internal staff who utilize this information for a variety of projects

### Objectives/Measure of Success

- To obtain accurate and correct parcel information. Our current parcel layer (originally created in the early 2000’s) is often found to have inaccuracies and incorrect line work. The errors are usually unnoticed until someone is working and/or interested in that particular area of the county. We work and repair these inconsistencies on a case by case basis, and cannot dismiss the amount of staff time that it takes to find solutions to these inconsistencies.

## Project Timeframes

Timeline – Project #8 Editing for Parcel Fabric Accuracy and PLSS Line Work		
Milestone	Duration	Date
Project #8 start	–	September 1, 2022
Project complete	–	December 31,2030

- Ongoing through this 3-year cycle

## Responsible Parties

- Dunn County Land Information Office staff

## Estimated Budget Information

- See table at the end of this chapter.

## Project #9: GIS and Land Records Management Software Hosting and Maintenance Services

### Project Description/Goal

- Keep our public records web portal and associated GIS data up to date and easily available to the general public.
- Invest in software maintenance to keep Dunn County land records users up to date with current licensing products
- **Land Info Spending Category:** Software and Website Development/Hosting Services

### Business Drivers

- Work with our software, and hardware, vendors to continue to offer, and enhance, the Dunn County land records management system and the county wide GIS products through a variety of online resources.

### Objectives/Measure of Success

- Current, up to date land records information to variety of consumers. If the data is out of date, incorrect and/or not current, our customers will let us know. We strive to keep this data as correct as possible. Internal GIS users have come to expect a current and appropriate toolkit for their day to day GIS work.

## Project Timeframes

Timeline – Project #9 GIS and Land Records Management software hosting and maintenance services		
Milestone	Duration	Date
Project #9 start	–	January 1, 2022
Project complete	–	December 31,2024

- Ongoing throughout the 3-year cycle

## Responsible Parties

- Land Records software vendors
- Applied Data Consultants (ADC) Web service hosting vendor
- ESRI Enterprise license agreement maintenance
- Dunn County Land Information, Environmental Service, Treasurer, Register of Deeds and any other related departments.

## Estimated Budget Information

- See table at the end of this chapter.

## Completed Projects

- A spring, leaf off, 2020 countywide 6" aerial photo was obtained.
- Delivery of LiDAR data derivatives (DEM, Hydro-enforced DEM, 1-ft contours, break lines, hillshade, culverts)
- Digitized and indexed Register of Deeds recorded documents. All real estate records are imaged, and ROD staff continues to back index images
- Surveys can now be searched for and made available to the public through the County web mapping site
- Developed addressing field inspection and transect survey mobile application
- Developed COVID-19 publically accessible status dashboard
- Inventoried parks and recreational areas, made data available through web mapping application
- Significant modifications to Emergency Management geospatial datasets and transition to NG911 ready Computer Aided Dispatch and law enforcement system
- Reorganization & Standardization of Land Records Data
- Completed V5 – V7 Statewide Parcel Map Database Project Submissions
- Parcel map fabric completion and conformance to WLIP benchmark standards
- IN PROGRESS Dunn County Planning & Zoning permit scanning, indexing, and linking within Land Records Management System.
- PENDING Dunn County re-districting work using 2020 U.S. Census data
- Continued improvements to accuracy of parcel mapping information

# Estimated Budget Table (All Projects for the 3 year cycle)

## Estimated Budget Information

Project Title	Item	Unit Cost/Cost	Land Info Plan	Project Total
			Citations Page # or section ref.	
<b>Project plan to maintain searchable format (Benchmarks 1 &amp; 2)</b>	GIS/IT specialist and Land Information Officer	10% of \$50,000 (SI) = \$5,000 Times 3 years	Page 39	\$15,000.00
<b>Project plan for PLSS (Benchmark 4)</b>	Land information office staff in cooperation with Survey staff.	90% of \$50,000 (SI) = \$45,000 Times 3 years	Page 40	\$135,000.00
<b>#1 - Emergency Management Data Development</b>	Land information office staff	25% of \$40,000 (BB) = \$10,000 Times 3 years	Page 41 & 42	\$30,000.00
<b>#2 - Water Resources Data Updates &amp; Development</b>	Land information office staff and/or contracted services	15% of \$40,000 (BB or retained fees) = \$6,000	Page 42 & 43	\$6,000.00
<b>#3 - Continued Expansion of Web &amp; Mobile Mapping Applications</b>	Land information office staff	5% of \$40,000 (BB) = \$2,000 Times 3 years	Page 43	\$6,000.00
<b>#4 - Aerial Imagery Collection</b>	Land information office staff and contractor	\$60,000 in this cycle (BB or retained fees)	Page 43 & 44	\$60,000.00
<b>#5 - Development of Building Footprints Layer &amp; Maintenance Plan</b>	Land Information Office staff and/or contracted services	10% of \$40,000 (BB or retained fees) = \$4,000 times 3 years	Page 44 & 45	\$12,000.00
<b>#6 - Right-of-Way Development for Highways</b>	Land Information Office staff and/or contracted services	10% of \$40,000 (BB or Retained Fees) = \$4,000 times 3 years	Page 45	\$12,000.00
<b>#7 – Training &amp; Education</b>	Land information office staff	5% of \$40,000 (BB) = \$2,000	Page 45 & 46	\$6,000.00
<b>#8 - : Editing for Parcel Fabric Accuracy and PLSS Line Work</b>	Land information office staff	\$10,000 per year for 3years (BB)	Page 46 & 47	\$30,000.00
<b>#9 - GIS and Land Records Management Software for website hosting and licensing</b>	Land Information office staff and outside vendors and software providers	\$46,500/3yr - ESRI \$5,000/yr – WGX (x3yr) \$18,000/yr - GCS (x3yr) \$12,400/yr – Bastion (x2yr) (BB and/or retained fees)	Page 47	\$152,700.00
<b>BB = Base Budget Grant (Used for general land records projects)</b>				
<b>SI = Strategic Initiative Grant (Mandated for specific land records projects)</b>				
<b>Retained Fees are provided from the ROD office. (\$7.00 per recorded document)</b>				
<b>GRAND TOTAL</b>				<b>\$464,700.00</b>

Note. These estimates are provided for planning purposes only. Budget is subject to change. All budgetary computations assume using WLIP retained fees, and/or grant reimbursements.

