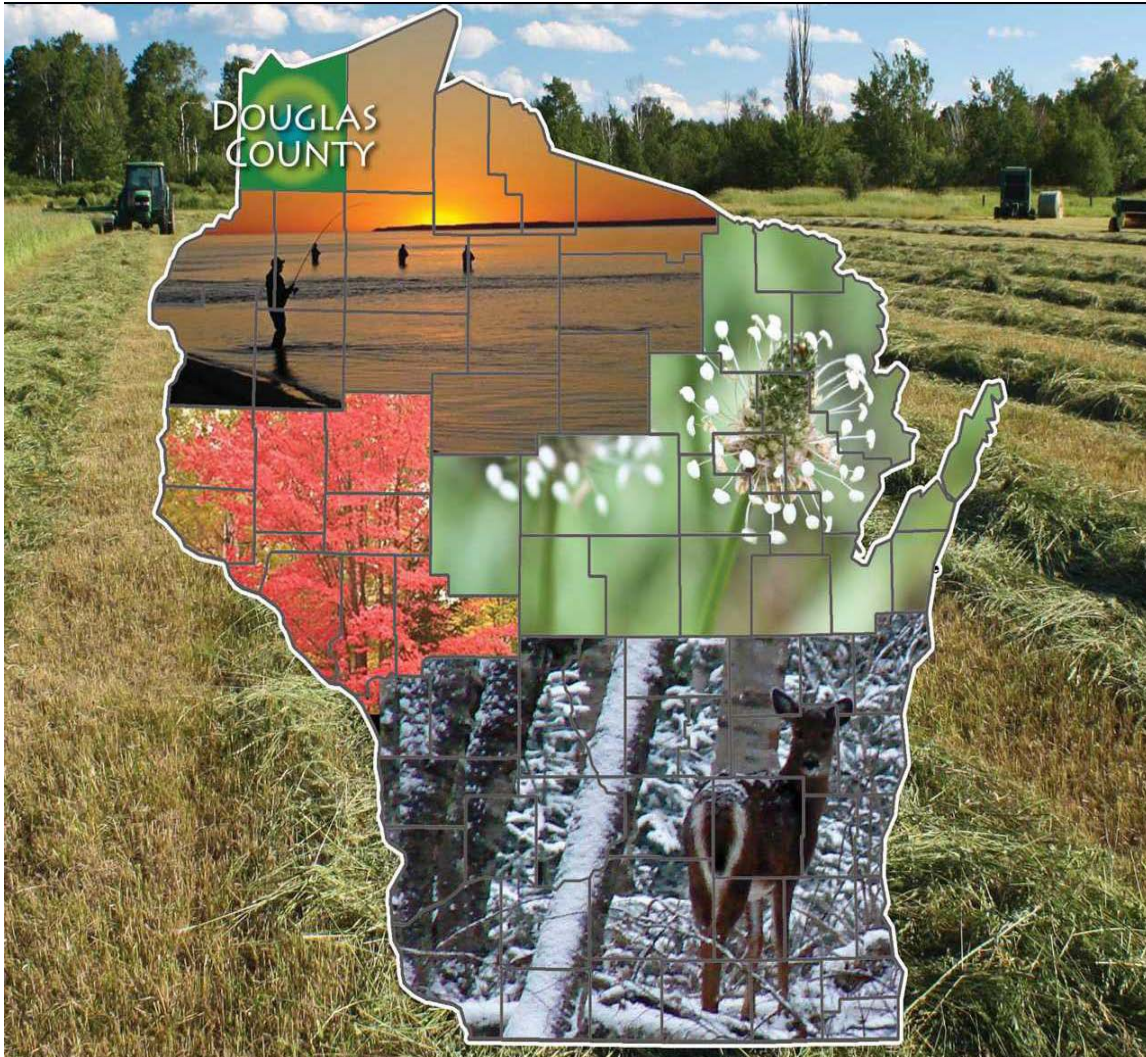


Douglas County

LAND RECORDS MODERNIZATION PLAN 2022 - 2024



Version Date 12/13/2021

Approved/Adopted by Land Information Council on: 12/20/2021

**Wisconsin Land Information Program
Wisconsin Department of Administration
101 East Wilson Street, 9th Floor
Madison, WI 53703
(608) 267-3369
www.doa.wi.gov/WLIP

<https://doa.wi.gov/Pages/LocalGovtsGrants/WLIP-Land-Info-Plans.aspx>

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EXECUTIVE SUMMARY

About this Document. This document is a land information plan for Douglas County prepared by the land information officer (LIO) and the land information council. By Wisconsin statute, “a countywide plan for land records modernization” is required for participation in the Wisconsin Land Information Program (WLIP). The purpose of this document is twofold: 1) to meet WLIP funding eligibility requirements necessary for receiving grants and retaining fees for land information, and 2) to plan for county land records modernization in order to improve the efficiency of government and provide improved government services to businesses and county residents.

Douglas County is submitting this *Land Records Modernization Plan* for review and adoption. The focus of goals and objectives for the next three years. This Plan defines Douglas County’s goals and objectives, reports the progress of its current activities, and describes new initiatives that it would like to undertake and define land record modernization. It also describes who maintains land records within the county; how the county has completed or plans to complete the individual foundational elements of modernization; how the county will comply with state-wide standards; and how the county will comply with state-wide standards; and how the county plans to integrate and share this information.

The outline of this document corresponds to questions or issues in the Instructions. The Plan is intended to provide county, town and city officials, state agencies, private sector and any other interested parties with basic knowledge of Douglas County’s efforts in land records modernization, it’s potential applications, and where the County potentially will be spending its land records fees generated from our participation in the WLIP.

The emphasis of this plan is to:

- Maintain and enhance the infrastructure and data acquired under previous plans
- Continue to collect and efficiently disseminate quality data to all Douglas County departments, other levels of government and the general public
- Expand the use and integration of land information throughout Douglas County

The Plan will address new initiatives and our continuing programs. It will also list those initiatives from the previous plan that have been realized through funding from the Wisconsin Land Information Program. This Plan contains data effective 12/20/2021.

WLIP Background The WLIP, administered by the Wisconsin Department of Administration, is funded by document recording fees collected by Register of Deeds at the county-level. In 2020, Douglas County received \$ in WLIP grants and retained a total of \$ in local register of deeds document recording fees for land information. Beginning in 2016, WLIP Strategic Initiative grants are projected to increase the county land information budget by \$50k per year. The budget for 2016 was \$94,248. In 2017 the budget was \$90,096. In 2018 the grant amount was \$88,200, 2019 the grant amount was \$94,648. In 2020 the grant amount was \$86,344 and in 2021 the grant amount was \$88,728. Register of Deeds recording fees retained for land information in 2020 were \$70, 376.

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 Douglas County. Land information is central to county operations, as many essential services rely on accurate and up-to-date geospatial data and land records. A countywide land

information system supports economic development, emergency planning and response, and a host of other citizen services. The Douglas County land information system integrates and enables efficient access to information that describes the physical characteristics of land, as well as the property boundaries and rights attributable to landowners.

Mission of the Land Information Office.

Foster cooperation among County and City departments in the field of Geographic Information Systems (GIS); provide guidance for the Douglas County and the City of Superior’s GIS users in fulfilling the objectives of the DC/COS mission and business objectives.

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

Douglas County Land Information Projects: 2022-2024	
Project Plan	Project Plan to Maintain Searchable Format (Benchmarks 1 & 2)
Project Plan	Project Plan for Parcel Completion (Benchmark 3)
Project Plan	Project Plan for PLSS (Benchmark 4)
Project #1	Aerial Photo Acquisition
Project #2	Maintain and enhance web based mapping sites for public use
Project #3	Drone: Meet FAA Requirements and Training
Project #4	Mobile GIS Capabilities
Project #5	NextGen 911

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

1 INTRODUCTION

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

The WLIP and the Land Information Plan Requirement

In order to participate in the WLIP, counties must meet certain requirements:

- Update the county's land information plan at least every three years
- Meet with the county land information council to review expenditures, policies, and priorities of the land information office at least once per year
- Report on expenditure activities each year
- Submit detailed applications for WLIP grants
- Complete the annual WLIP survey
- Subscribe to DOA's land information listserv
- Coordinate the sharing of parcel/tax roll data with the Department of Administration in a searchable format determined by DOA under s. 59.72(2)(a)

LAND INFORMATION

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

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

– Wis. Stats. section 59.72(1)(a)

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

Act 20 and the Statewide Parcel Map Initiative

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

Act 20 also provided more revenue for WLIP grants, specifically for the improvement of local parcel datasets. The WLIP is dedicated to helping counties meet the goals of Act 20 and has made funding available to counties in the form of Strategic Initiative grants to be prioritized for the purposes of parcel/tax roll dataset improvement.

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

WLIP Benchmarks (For 2016-2021 Grant Years)

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

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

County Land Information System History and Context

In the original Land Records Modernization Plan in 1998, Douglas County identified three high priority goals; 1) Update the Public Land Survey System, 2) Complete tax parcel mapping by year 2000 and 3) Develop an integrated GIS by year 2002 with all data residing on a GIS server. Beginning in 1999, Douglas County obtained grants through the Wisconsin Land Information Program to target specific geographical areas for reestablishing PLSS corner monuments utilizing private Registered Land Surveyors and purchased sophisticated GPS surveying equipment. Since 2002, our accomplishments include; completion of county-wide tax parcel mapping, creation of a full-time County Surveyor/Land Information Officer position, collocation of the Land Records staff with the Planning and Zoning staff, creation of a dedicated computer network and consolidation of County and City of Superior GIS staff through a formal shared services agreement. This effort provides Douglas County an opportunity to advance the stature of the county GIS program matching the expectations of our customers and our ability to meet their needs. We anticipate an increase in customer expectations in terms of accessibility, accuracy and responsiveness. This iteration of the planning cycle will assure that we meet those expectations by retaining high quality staff the acquisition of new technologies, maintenance and upgrading of the level of precision of our parcel mapping and integration of digital data sets secured from a variety of sources.

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.

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 that the county land information councils to approve final plans. A record documenting county land information council approval should be included in the final submission of the plan to DOA. County board approval of plans is encouraged but not required.

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

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.

County Land Information Plan Timeline - Updated for 2021

- Comments on draft instructions due by March 19, 2021.
- 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).** For the review process, counties submit draft plans for review and approval no later than September 30th. Please allow a month for review of the draft plan. As with the last update, county peer review and comments will be encouraged, but voluntary and non-binding.
- **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.

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- County surveyor or a registered professional land surveyor employed within the county
- Other members of the board or public that the board designates

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

This plan was prepared by the county LIO, the Douglas County Land Information Council, and others as listed below.

Douglas County Land Information Council and Plan Workgroup

Name	Title	Affiliation	Email	Phone
*Matt Johnson	County Surveyor	Douglas County Land Information Office	matt.johnson@douglascount ywi.org	715-395- 1340
*Zach Devoe	Land Services Director	Douglas County Land Information Office	zach.devoe@douglascountywi.org	715-395- 1386
*Rosemary Lear	County Board Supervisor	Douglas County Board Supervisor	rosemary.lear@douglascount tywi.org	715-398-6745
*Tracy Middleton	Register of Deeds	Douglas County Register of Deeds	tracy.middleton@douglasco ntywi.org	715-395- 1350
*Carol Jones	Treasurer	Douglas County Treasurer	carol.jones@douglascounty wi.org	715-395- 1348
*Marissa Hanson	Real Property Lister	Douglas County Land Information Office	Marissa.hanson@douglascounty wi.org	715-395- 1386
*Brad Theien	Assessor	Assessor		218-390- 3294
*Jon Fiskness	GIS Coordinator	City of Superior GIS	fisknessj@ci.superior.wi.us	715-395- 7423
*Maria Letsos	Realtor	Remax 1	marialetsos@hotmail.com	715-392- 1111
*Dave Sletten	Emergency Planner/Risk Manager	Douglas County Emergency Management	dave.sletten@douglascounty wi.org	715-395- 1497
Vacant	City of Superior Councilor	City of Superior		

* Land Information Council Members designated by the plus symbol

Plan Designers: Zach DeVoe, Jon Fiskness, Marissa Hanson and Paul Howard.

2 FOUNDATIONAL ELEMENTS

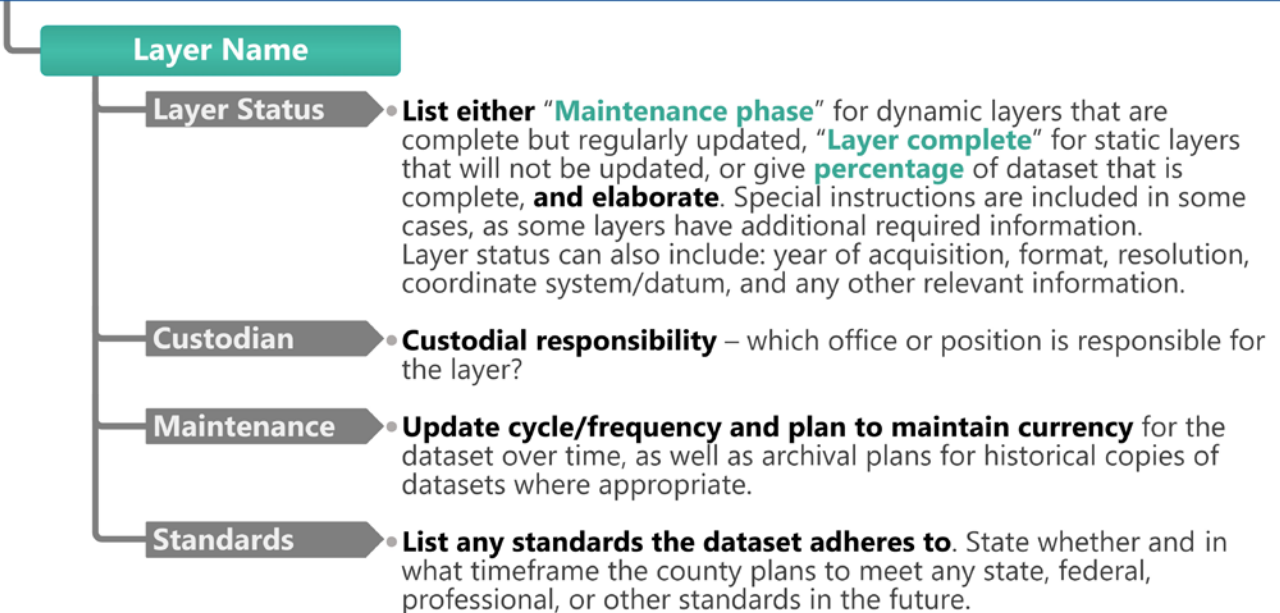
Counties must have a land information plan that addresses development of specific datasets or map layer groupings historically referred to as the WLIP Foundational Elements. Foundational Elements incorporate nationally-recognized “Framework Data” elements, the major map data themes that serve as the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

FOUNDATIONAL ELEMENTS

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

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

Foundational Element Name



PLSS

Public Land Survey System Monuments

Layer Status

PLSS Layer Status

	Status/Comments
Number of PLSS corners (selection, ¼, meander) set in original government survey that can be remonumented in your Douglas County	● 4393
Number of PLSS corners capable of being remonumented in your county that have been remonumented	2671
Number of remonumented PLSS corners with survey grade coordinates (see below for definition) <ul style="list-style-type: none"> ● SURVEY GRADE – coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision ● SUB-METER – point precision of 1 meter or better ● APPROXIMATE – point precision within 5 meters or coordinates derived from public records or other relevant information 	<ul style="list-style-type: none"> ● 2407, (Survey Grade) ● 31, (Sub-meter) ● 233, (Approximate)
Number of survey grade PLSS corner coordinates integrated into county digital parcel layer	1185
Number of non-survey grade PLSS corner coordinates integrated into county digital parcel layer	945
Tie sheets available online?	YES https://douglascowi.wgxtreme.com/
Percentage of remonumented PLSS corners that have tie sheets available online (whether or not they have corresponding coordinate values)	100% (2671)
Percentage of remonumented PLSS corners that have tie sheets available online (whether or not they have corresponding coordinate values) and a corresponding URL path/hyperlink value in the PLSS geodatabase	100% (2671)
PLSS corners believed to be remonumented based on filed tie-sheets or surveys, but do not have coordinate values	● 662
Approximate number of PLSS corners believed to be lost or obliterated	● 1678
Which system(s) for corner point identification/ numbering does the county employ (e.g., the Romportl point numbering system known as Wisconsin Corner Point Identification System, the BLM Point ID Standard, or other corner point ID system)?	Romportl Point Numbering System
Does the county contain any non-PLSS areas (e.g., river frontage long lots, French land claims, private claims, farm lots, French long lots, etc.) or any special situations regarding PLSS data for tribal lands?	● NO
Total number of PLSS corners along each bordering county	Burnett = 30 Washburn= 53 Bayfield= 87 WI/MN State Line= 72
Number of PLSS corners remonumented along each county boundary	Burnett = 30 Washburn= 53 Bayfield= 87 WI/MN State Line= 72
Number of remonumented PLSS corners along each county boundary with survey grade coordinates	Burnett = 30 Washburn= 53 Bayfield= 87 WI/MN State Line= 72
In what ways does your county collaborate with or plan to collaborate with neighboring counties for PLSS updates on shared county borders?	Burnett = 30 (100%) Washburn= 53 (100%) Bayfield= 52 (60%) WI/MN State Line= 25 (34%) Douglas County has worked with neighboring counties and states on shared PLSS updates and plans to continue to do so in the future

Custodian

Douglas County Land Information Office, LIO, County Surveyor

Maintenance

- **AS Needed**

Daily 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. s. 236.15, Wis. Stats. Surveying requirements.
- Wisconsin County Surveyor's Association survey grade standard:

Coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by s. 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision.
- Statutory Standards for PLSS Corner Remonumentation
 - s. 59.74, Wis. Stats. Perpetuation of section corners, landmarks.
 - s. 60.84, Wis. Stats. Monuments.
 - ch. A-E 7.08, Wis. Admin. Code, U.S. public land survey monument record.
 - ch. A-E 7.06, Wis. Admin. Code, Measurements.
 - s. 236.15, Wis. Stats. Surveying requirement.
- SURVEY GRADE standard from Wisconsin County Surveyor's Association:
 - **SURVEY GRADE** – coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision
 - **SUB-METER** – point precision of 1 meter or better
 - **APPROXIMATE** – point precision within 5 meters or coordinates derived from public records or other relevant information

Other Geodetic Control and Control Networks

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

Layer Status

- NGS Points, City of Superior Street Centerlines Monuments: in progress 50%

Custodian

- DC Land Information Office

Maintenance

- As needed

Standards

- Not Applicable

Parcel Mapping**Parcel Geometries****Layer Status****Progress toward completion/maintenance phase:**

100% complete accuracy varies based on PLSS control available

- Available for free download at <http://www.ci.superior.wi.us/index.aspx?nid=621> in ESRI Shapefile format

- **Format:** ESRI Shapefile format
- **Projection and coordinate system:** Douglas County Coordinate System as defined by State of WI
- **Integration of tax data with parcel polygons:** Integration of Douglas County Tax lister data included with ESRI Shapefile format
- **ESRI Parcel Fabric/LGIM Data Model:** Implemented the ESRI Local Government Information Model in 2015 for the Parcels Parcel Fabric Data Model, and/or ESRI's Local Government Information Model.
- Online Parcel Viewer Software/App and Vendor name: **WebGUIDE Xtreme (WGX)**
<http://douglascowi.wgxtreme.com/>
- **Unique URL path for each parcel record:** NO

Custodian

Douglas County Land Information Office

Maintenance

- **Update Frequency/Cycle:** Parcel polygons are updated Daily

Standards

Data Dictionary:

Name	Description
OBJECTID	GIS related ID for the geometry
PARCELNO	Identifies a parcel
Acres	GIS Acres
LOCATION	Location of parcel, City, Village or Rural
ParcelID	GCS ParcelID for use in GCS only
PersonID	Entity ID from GCS for use in GCS only
LastName	Last Name of parcel owner
FirstName	First Name of parcel owner
COOWNER	Name of deeded co owner
City	Mailing Address City
MAILINGADDRESS	Mailing Address
State	Mailing Address State
ZipCode	Mailing Address Zip Code
Municipality	The name of the municipality where the parcel resides.
PROPERTYADDRESS	Physical address of the parcel
Acres	The legal acres. Note- this is not the sum of the acres of the valuations known as aggregate ratio.
LEGALDESC	Short Legal description of parcel
FairMarketValue	The fair market value of the parcel. It is only applicable after tax calculation.
TOTALLANDVAL	The total land value (real estate only)

TOTALIMPVAL	The total improvement value (real estate only)
TOTVAL	The sum of land value and improvement value (real estate only).
SECTION_	PLSS Section
TOWN	PLSS Township
TOWNDIR	Addressing direction either E or S
Range	PLSS Range
RANGEDIR	Addressing direction either E or S
QQ	PLSS Section Quarter Quarter
Q	PLSS Section Quarter
TaxYear	Indicates the tax year of the parcel information
LANDCLASS	<p>Taxation related land class (this is not land use)</p> <p>G1 = Residential G2 = Commercial G3 = Manufacturing G4 = Agricultural G5 = Undeveloped G5M = Agriculture Forest G6 = Productive Forest Lands G7 = Other</p> <p>W0 = County Special-Use Land W1 = Private Forest Crop Pre 1972 W2 = Private Forest Crop Post 1971 W3 = Private Forest Crop Special W4 = County Forest Land W5 = MFL Open After 2004 W6 = MFL Closed After 2004 W7 = MFL Open Before 2005 W8 = MFL Closed Before 2005</p> <p>X1 = Federal X2 = State X3 = County X4 = Other X5 = Municipality</p>
DOCNUM	Documents referencing the creation of the parcel or ownership changes
TOTALWOODLANDVAL	Total value of woodland on a parcel
TOTALINCLWOODLAND	Sum of property value including woodland
Notes	Tax lister related notes
Parcel_use	Assessment related parcel use (no data)

School_district	Name of school district for parcel
School_district_id	School district number for parcel

- The data dictionary is a separate document

Assessment/Tax Roll Data

Layer Status

Progress toward completion/maintenance phase:

- 100% complete accuracy varies based on PLSS control available
- Available for free download at <http://www.ci.superior.wi.us/index.aspx?nid=621> in ESRI Shapefile format
- Douglas County Coordinate System as defined by State of WI
- Integration of Douglas County Tax lister data included with ESRI Shapefile format
- Implemented the ESRI Local Government Information Model in 2015 for the Parcels

Tax Roll Software/App and Vendor name: GCS Software

Custodian:

Douglas County Land Information Office

Maintenance

Maintenance of the Searchable Format standard: To maintain the Searchable Format standard, the county will continue to have a combination of staff and a consultant to convert the data to the searchable format required by the WLIP. This is considerably easier to do than to make a large switchover of our current software and data schema. The consultant has developed a program that runs through the data and makes the needed changes. As the WLIP requirements change the DB Consultant makes the needed changes to the programming. The staff then QA/QC the data for errors and do any final changes to anomalies. Typically this is less than 100 data records of nearly 50,000.

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. (See Description Above)

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.
- s. 236.15, Wis. Stats. Surveying requirements.
- Wisconsin County Surveyor's Association **survey grade** standard: Coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by s. 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision.

Non-Assessment/Tax Information Tied to Parcels

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

Layer Status:

- **Permit data**

Custodian:

- **Douglas County Zoning**

Maintenance

- **Daily**

Standards

- Not Applicable

ROD Real Estate Document Indexing and Imaging

Layer Status

- **Grantor/Grantee Index.** Register of Deeds maintains a grantor/grantee and tract index so that searches can be made by grantor and grantee, legal description, document number, volume and page.
- **Tract Index.** Tract index is PLSS based. Digitized tract index from 1986 to present. Prior to 1986 tract index is paper based.
- **Imaging.** Scans
- **ROD Software/App and Vendor Name: Landlink/Trimin Systems**
- **Landlink/Trimin Systems** is an in house software for recording and viewing documents
- **Landshark** is an online viewing of documents \$3 per session fee

Custodian

- Douglas County Register of Deeds

Maintenance

- Daily

Standards

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

LiDAR and Other Elevation Data

LiDAR

Layer Status

- **Most recent acquisition year:** 2016
- **Accuracy:** 7.2 cm vertical accuracy
- **Post spacing:** 0.7 meter
- **Contractor's standard, etc.:** NA
- **Next planned acquisition year:** Unknown, Budget Dependent

Custodian

- DC Land Information Office

Maintenance

- Flown as needed within budget constraints

Standards

Data meets FEMA standards but doesn't meet USGS QL2 specifications.

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

- DEM and Hillshade; Complete 100%

Custodian

- DC Land Information Office

Maintenance

- None

Standards

- FEMA QC Guidelines

Other Types of Elevation Data**Layer Status**

- USGS 10 foot Contour Data; Complete 100%

Custodian

- USGS

Maintenance

- None

Standards

- Not Applicable

Orthoimagery**Orthoimagery****Layer Status**

- **Most recent acquisition year:** 2019
- **Resolution:** 3-6"
- **Contractor's standard:** Pictometry
- **Next planned acquisition year:** 2022
- **WROC participation in 2025:** We will not be participating

Custodian

- DC Land Information Office

Maintenance

- Every 3 years

Standards

- Obtain the highest resolution available within our budget

Historic Orthoimagery**Layer Status**

- **Digital Orthophoto's available for years:** 1938, 1948, 1962, 1973, 1986 1992, 1973, 1992, & 2000. Black and white imagery of villages and C.O.S. 1999.

Custodian

City of Superior/Douglas County

Maintenance

- Not Applicable

Standards

- Not Applicable

Other Types of Imagery

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

Layer Status

Oblique Aerial Imagery: Countywide Pictometry Spring 2009 (leaf off) and 2013 (leaf off).

- The county chose to NOT participate in the WROC as we already were in a contract with Pictometry for 2 flights, one in 2013, 2016, 2019 and 2022.

**Custodi
an**

- DC LIO

Maintenance

- Every 3 Years

Standards

- Obtain the highest resolution available within our budget

Address Points and Street Centerlines

Address Point Data

Layer Status

- **Address Points:** Countywide; Complete 100%

Custodian

- DC LIO

Maintenance

nce

-

Weekly

Standards

- Wisconsin GIS NG9-1-1 Data Standard (Site/Structure Address Point)

Building Footprints

Layer Status

- **Building Footprints and building points:** Countywide; Complete 100%

Custodian

- DC LIO

Maintenance

nce

- As new aerial photos come available, every 3 years (Pictometry)

Standards

- Not Applicable

Other Types of Address Information

e.g., Address Ranges

Layer Status

Included in the Street Centerlines

- Complete 100%

Custodian

- DC LIO

Maintenance

nce

- Weekly

Standards

- N/A

Street Centerlines

Layer Status

Street Centerlines

- Complete 100%

Custodian

- DC LIO/Highway Commissioner

Maintenance

- Weekly

Standards

- Wisconsin GIS NG9-1-1 Data Standard (Site/Structure Address Point)

Rights of Way

Layer Status

- **Right of Way:**
- Countywide Complete 100%

Custodian

- DC LIO

Maintenance

- Maintained as a separate layer from the Parcels

Standards

- Not Applicable

Trails

e.g., Recreational Trails

Layer Status

- Motorized and non-motorized trail data Complete 100%

Custodian

- DC Forestry

Maintenance

- Annual

Standards

- Not Applicable

Trails

e.g., Recreational Trails, Snowmobile Trails

Layer Status

- Motorized and non-motorized trail data
- Complete 100%

Custodian

- DC Forestry

Maintenance

- Annual

Standards

- Not Applicable

Land Use

Current Land Use

Layer Status

- Existing Land use: Douglas County's jurisdiction only
 - Complete 100%

Custodian

- Northwest Regional Planning Commission

Maintenance

- Annually

Standards

- Not Applicable

Future Land Use

Layer Status

- Future Land use: Douglas County's jurisdiction only; Complete 100%

Custodian

- Northwest Regional Planning Commission
-

Maintenance

- None

Standards

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

Future land use maps are typically created through a community's comprehensive planning process. Future land use mapping for a county may be a patchwork of maps from comprehensive plans adopted by municipalities and the county.

Zoning

County General Zoning

Layer Status

- Douglas County's jurisdiction only Complete 100%

Custodian

- Zoning Coordinator

Maintenance

- Monthly

Standards

For the purposes of this ordinance, the unincorporated areas of Douglas County are hereby divided into the following types of districts:

R-1: Residential District

R-2: Residential District

RR-1: Residential-Recreation District

- A-1: Agricultural District
- C-1: Commercial District
- I-1: Industrial District
- F-1: Forestry District
- W-1: Resource Conservation District
- PUD: Planned Unit Development District
- UVD: Unincorporated Village District (Overlay District)

Shoreland Zoning

Layer Status:

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

Custodian

- Douglas County Zoning Department

Maintenance

- As Needed

Standards

- State Of Wisconsin

Farmland Preservation Zoning

Layer Status

- Not administered by county.
- **Year of certification:** NA

Custodian

- NA

Maintenance

- NA

Standards

- NA

Floodplain Zoning

Layer Status

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

Custodian

- Douglas County/FEMA

Maintenance

- FEMA

Standards

- FEMA

Airport Protection

Layer Status

- Not administered by county.

Custodian

- NA

Maintenance

- NA

Standards

- NA

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

- None

Custodian

- NA

Maintenance

- NA

Standards

- NA

Administrative Boundaries

Civil Division Boundaries

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

Layer Status

- Municipalities; Complete 100%

Custodian

- DC LIO

Maintenance

As Needed

Standards

- NA

School Districts

Layer Status

- **Progress toward completion/maintenance phase:** Geometry has been created; Complete 100%
- **Relation to parcels:**
 - **Attributes linked to parcels:** Also tied to the parcels through a school district field

Custodian

- DC Real Property Lister

Maintenance

- As needed

Standards

- NA

Election Boundaries

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

Layer Status

- Geometry is based on US Census and redistricting every 10 years

Custodian

- DC

Clerk

Maintenance

- 10 Years with new census and redistricting

Standards

- NA

Utility Districts

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

Layer Status

- Not administered by the County

Custodian

- NA

Maintenance

- NA

Standards

- NA

Public Safety

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

Layer Status

- Emergency Service Districts, Hazardous Materials Locations, 911 call center service areas, healthcare facilities, fire/police districts; Complete 100%

Custodian

- DC Emergency Management Coordinator

Maintenance

- As Needed

Standards

- NA

Emergency Service Boundary – Law/Fire/EMS

Layer Status

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

Custodian

- DC Emergency Management Coordinator

Maintenance

- As Needed

Standards

- NENA
- **Wisconsin GIS NG9-1-1 Data Standard** (Emergency Service Boundary)

Public Safety Answering Points (PSAP) Boundary

Layer Status

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

Custodian

- DC Emergency Management Coordinator

Maintenance

- As needed

Standards

- NENA
- [Wisconsin GIS NG9-1-1 Data Standard](#) (PSAP Boundary)

Provisioning Boundary

Layer Status

- Complete

Custodian

- DC Emergency Management Coordinator

Maintenance

- As Needed

Standards

- NENA
- [Wisconsin GIS NG9-1-1 Data Standard](#) (Provisioning Boundary)

Other Public Safety

e.g., [Healthcare Facilities](#)

Layer Status

- Administered by county but not in GIS format.

Custodian

- Douglas County Health Department

Maintenance

- As Needed

Standards

- N/A

Lake Districts

Layer Status

- Administered by county but not in GIS format.

Custodian

- Douglas County

Maintenance

- Annually in GCS

Standards

- None

Native American Lands

Layer Status

- Not administered by the County

Custodian

- NA

Maintenance

- NA

Standards

- NA

Other Administrative Districts

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

Layer Status

- County Forests, County Parks Complete 100%

Custodian

- DC Forestry Director

Maintenance

- As Needed

Standards

- NA

Other Layers

Hydrography Maintained by County or Value-Added

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

Layer Status

- None

Custodian

- NA

Maintenance

- NA

Standards

- NA

Cell Phone Towers

Layer Status

- None

Custodian

- NA

Maintenance

- NA

Standards

- NA

Bridges and Culverts

Layer Status

- Bridges and Culverts; In progress 50%

Custodian

- DC Highway Commissioner

Maintenance

- Annual
- Standards**
- NA

Other / Miscellaneous

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

Layer Status

- pipelines, railroads, non-metallic mining; Complete 100%

**Custodi
an**

- DC LIO

**Maintenan
ce**

- As
Needed

Standards

- NA

3 LAND INFORMATION SYSTEM

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

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

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

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

Current Land Information System

Diagram of County Land Information System

1. Land Information Officer/Land Records GIS Staff

a) Current Land Records responsibility and duties.

- (1) Coordinates land information projects within the county. (\$59.88)
- (2) Prepares the Countywide Plan for land records modernization.
- (3) Oversees the LIS/GIS portion of the countywide computer network and data processing. (IP)
- (4) Maintains a countywide layering scheme for all mapped entities. (IP)
- (5) Maps and maintains all digital parcel maps. (IP)
- (6) Works on special projects for individual departments, municipalities, agencies, and the public and private sector. (IP)
- (7) Oversees the integrity of maps and corresponding land records data submitted or created for use in the countywide GIS/LIS program. (IP)
- (8) Oversees budgets and grants for use in land records modernization efforts.
- (9) Maintains County IMS site. (IP)
- (10) Maintenance of digital shore land, floodplain, and recreation maps. (IP)
- (11) Maintain hard copy parcel maps, including property divisions, splits, and merges.
- (12) Maintain or oversee maintenance of digital parcel maps. (IP)

b) Future Land Records responsibilities and duties (expected or willing to assume).

- (1) Educating users in the creation of maps and the use of GIS. (2) Program user interfaces for data entry and GIS queries.

2. Register of Deeds

a) Current Land Records responsibility and duties

- b) Records and stores deeds, mortgages, plats, and associated land records. (\$59.21) and maintains its corresponding database.
 - (1) Maintains a computerized tract index and grantor/grantee index. (\$59.21)

- (2) Maintains a database of description and ownership information on all parcels (\$70.09)
- (3) Responsibility for the use and management of a document imaging system. (IP)

c) Future Land Records responsibilities and duties (expected or willing to assume). None

3. County Clerk

a) Current Land Records responsibility and duties

- (1) Maintains hard copy electoral and jurisdictional maps. (\$5-10)
- (2) Maintains highway and road relocation orders. (\$32.05, 84.09)
- (3) Maintain a state trunk highway system map. (\$84.02)

b) Future Land Records responsibilities and duties (expected or willing to assume). None

4. Emergency Management

a) Current Land Records responsibility and duties.

- (1) Verify property addresses and road names for 911 data base. (IP)
- (2) Maintains records on hazardous chemical storage. (\$323.60)
- (3) Maintains records on previously reported chemical spills. (\$323.60)
- (4) Maintains records on damages to public & private properties. (\$323.30)
- (5) Maintains hazardous substance info. & emergency planning. (\$323.60)
- (6) Maintains records of Emergency Response Teams. (\$323.70)

b) Future Land Records responsibilities and duties (expected or willing to assume). None

5. County Surveyor

a) Current Land Records responsibility and duties

- (1) Maintains information on PLSS corners. (\$59.74)
- (2) Maintains information on the High Accuracy Network (HARN) densification in the county.
- (3) Maintains filing and scanning of Maps of Survey and U.S. Public Land Survey Monument Record sheets as provided to its office. (IP)
- (4) Oversee PLSS monument maintenance activities. (IP)
- (5) Scans and maintains other documents related to survey records. (IP)
- (6) Maintain a countywide database and GIS of PLSS section corners. (IP)
- (7) Completes and oversees Douglas County Remonumentation Program. (IP)

b) Future Land Records responsibilities and duties (expected or willing to assume). None

6. Zoning Department

a) Current Land Records responsibility and duties

- (1) Maintain zoning and land use maps as approved by unincorporated municipalities. (\$59.693, 87.30)
- (2) Maintain shore land and floodplain zoning. (\$59.69)
- (3) Review land division in the form of plat and CSM reviews. (IP) (4) Enforces county zoning and building ordinances. (\$59.69)

b) Future Land Records responsibilities and duties (expected or willing to assume). None

7. Land Conservation Department

a) Current Land Records responsibility and duties (Chapter §92)

- (1) Administer Land and Water Resource Management Plan. (\$92.10)

- (2) Maintains natural resource data and landowner plans in administration of Wisconsin Soil and Water Resource Management Program. (\$92.14)
- (3) Administer Farmland Preservation Program (\$91.10)
- (4) Administer Wildlife Damage Program. (\$29.889)
- (5) Maintain Upper St. Croix/Eau Claire Rivers Priority Watershed Project. (\$92.14)
- (6) Maintain Aquatic Invasive Species Strategic Plan. (IP)
- (7) Maintain digital watershed maps. (IP)
- (8) Maintain digital Comparative Analysis of Sub-watersheds data. (IP)
- (9) Maintain digital shoreland mitigation inspection database. (\$92.17)
- (10) Maintain digital culvert inventory data base. (IP)
- (11) Maintain digital wetland restoration inventory database. (IP)

b) Future Land Records responsibilities and duties (expected or willing to assume). None

8. Highway Department

a) Current Land Records responsibility and duties

- (1) Maintains a filing system for right-of-way design and as-built plans.
- (2) Maintains sign inventory.
- (3) Maintains driveway inspection permits.

b) Future Land Records responsibilities and duties (expected or willing to assume). None

9. Real Property Lister/Treasurer

a) Current Land Records responsibility and duties (\$70.09)

- (1) Maintains and assigns parcel numbers of all real estate & personal property in Douglas County. (IP)
- (2) Maintains Tax Roll information for rural Douglas County, which includes current ownership information, mailing addresses, brief legal descriptions with calculated acreages, general land classification with valuation of each classification, estimated fair market values, exempt property and DNR contracted property, property address and lottery credits. (IP)
- (3) Maintenance of public schools, WITC, Sanitary, BID, TIF and other special districts needed for accurate disbursement of set levies. (IP)
- (4) Maintains mill rate figures, special assessments/charges for each municipality.
- (5) Collection of general property taxes. (\$74.07)
- (6) Preparation of acquiring and sale of tax delinquent properties. (IP)

b) Future Land Records responsibilities and duties (expected or willing to assume). None

10. Douglas County Forestry Department

a) Current Land Records responsibility and duties

- (1) Maintain timber stand polygons on Douglas County Forest Land and Special Use Land. (IP)
- (2) Maintain gas tax roads (County Forest) and forest access roads. (IP)
- (3) Maintain Snowmobile/ATV trails. (IP)

b) Future Land Records responsibilities and duties (expected or willing to assume). None

11. Veterans Services Administrator

- a) Current Land Records responsibility and duties
 (1) Maintain a list of veteran burials in Douglas County

WI State Statute 45.62(1)(e & f)

45.62 Burial places compiled.

(1) The department may compile a record of veteran's burial places located within the state that may, so far as practicable, indicate all of the following information: (a) The deceased veteran's name.

25

- (b) The service in which the deceased veteran was engaged.
 (c) The appropriate designation of the deceased veteran's armed forces unit. (d) The deceased veteran's rank and period of service.
 (e) The name and location of the cemetery or other place in which the deceased veteran's body is interred. (f) The location of the deceased veteran's grave in the cemetery or other place of interment.
 (g) The character of the headstone or other marker, if any, at the deceased veteran's grave.

Technology Architecture and Database Design

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

- Servers, Desktops, Laptops, GPS, Tablets, etc
- UAS Drone

Software

- ESRI Enterprise Licensing Agreement, ERIS Software and Core Extensions, Microsoft SQL
- County plans to use ArcGIS Pro in the future

Website Development/Hosting

- ADC Technologies, Design Elemental, ESRI AGO/Portal

Metadata and Data Dictionary Practices

Metadata Creation

Metadata creation and maintenance process:

Metadata has been processed for much (75%) of the City/County GIS data. Data dictionaries are used when applicable but not many exist for the data. We try to follow the FGDC Content Standards whenever possible.

Metadata Software

- **Metadata software:** ArcCatalog
 - 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:** Varies depending on the dataset

Metadata Policy

- **Metadata Policy:** None

Municipal Data Integration Process

The City of Superior and Douglas County have integrated most of their data sets, with a few exceptions, Zoning, Land use, SAMP, trails and Centerline Monument data.

Public Access and Website Information

Type of Website	Software or App	3 rd Party or Contractor	URL	Update Frequency / Cycle
GIS web mapping site	WGExtreme	Applied Data Consultatns	http://douglascowi.wgxtreme.com	Weekly
ROD land records search tools	LandShark	Trimin Government Solutions	http://rdlandshark.douglascountywi.org/LandShark/about.jsp?aboutKey=Disclaimer	Daily
RPL or tax parcel site	GCS	GCS	http://www.gcssoftware.com/douglas/search.aspx	As records are updated
Zoning information (PDF or WebApp format)		County Planning and Zoning Administrator	http://www.douglascountywi.org/index.aspx?NID=734	Annual
PLSS tie sheets	WGExtreme	ADC	http://douglascowi.wgxtreme.com	Daily
Other				

Public Access and Website Information

Public Access and Website Information (URLs)

GIS Webmapping Application(s) Link - URL

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

GIS Download Link - URL

<http://www.ci.superior.wi.us/474/Geospatial-Data-GIS>

Real Property Lister Link - URL

<https://gcs.douglascountywi.org/gcswebportal/search.aspx>

Register of Deeds Link - URL

<https://rdlandshark.douglascountywi.org/LandShark/login>

REST Services Link - URL

<https://portal.superiordcgis.org/server/rest/services>

Image Services Link - URL

<https://imagery.superiordcgis.org/arcgis/rest/services>

Municipal Website Information

Municipal Website	Municipal Website URL
City of Superior GIS Web Map**	http://www.ci.superior.wi.us/150/Geographic-Information-System-GIS
Town of Amnicon	https://townofamnicon.com/
Town of Bennett	https://townofbennettwi.org/
Town of Brule	https://brule-wi.org/
Town of Cloverland	http://townofcloverland.org/
Town of Dairyland	http://townofdairyland.com/index.html
Town of Gordon	https://townofgordon.org/
Town of Hawthorne	https://townofhawthorne.org/
Town of Highland	https://townofhighland.net/
Town of Lakeside	http://townoflakeside.com/
Town of Maple	https://townofmaple.com/
Town of Oakland	http://www.townofoakland.net/
Town of Parkland	https://www.douglascountywi.org/519/Parkland
Town of Solon Springs	https://townofsolonsprings.com/
Town of Summit	https://www.douglascountywi.org/522/Summit
Town of Superior	https://townofsuperior.net/
Town of Wascott	https://www.douglascountywi.org/528/Wascott
Village of Poplar	https://villageofpoplar.com/
Village of Lake Nebagoom	https://villagelakenebagamon.com/
Village of Solon Springs	https://villageofsolonsprings.com/
Village of Oliver	http://www.villageofoliver.org/index.html
village of Superior	http://villageofsuperior.org/

Data Sharing

Data Availability to Public

Data Sharing Policy

All City/County data is available openly on the website:

<http://www.ci.superior.wi.us/474/Geospatial-Data-GIS> Data Sharing Restrictions

Douglas County has no data sharing restrictions at this time

Open Records Compliance

In compliance with Wisconsin's Wisconsin Open Records Act 19.31

Data Sharing Restrictions and Government-to-Government Data Sharing

Data Sharing Restrictions

Douglas County has no data sharing restrictions at this time

Government-to-Government Data Sharing

- a. **Formal data sharing:** Open data sharing agreements with SLC, SWLP, City of Duluth, NWRPC, ARDC, WLSSD & WIDNR.
- b. **Maintenance agreements:** All departments have access to data.
- c. **Cooperative agreements:** City of Superior/Douglas County.
- d. **Consortia:** Four-County Northwestern Wisconsin Pictometry Project 2009.
- e. **Collaborative arrangements:** Participate in Wisconsin Land Information peer review process.
- f. **Statutory relationships:** N/a

Training and Education

- a. **Training:** Training will be provided both internally through the LIO and externally as needed and as funds exist.
- b. **Use of Technology to facilitate education and training:** The technology is used to help train the users and public on the program.
- c. **Participation in clearinghouse/repository and land info technical assistance listserv.:** Currently participate and will continue.
- d. **Education Funds:** The training and education dollars obtained through the Program have been used to send staff to WLIA events.
- e. **ESRI Virtual Campus Training:** The County has access to 3750 credits of ESRI Virtual Campus training for its GIS users.

4 CURRENT & FUTURE PROJECTS

This chapter lists the current and future land information projects the county is currently undertaking or intends to pursue over its planning horizon. A project is defined as a temporary effort that is carefully planned to achieve a particular aim. Projects can be thought of as the *means* to achieving the county's mission for its land information system.

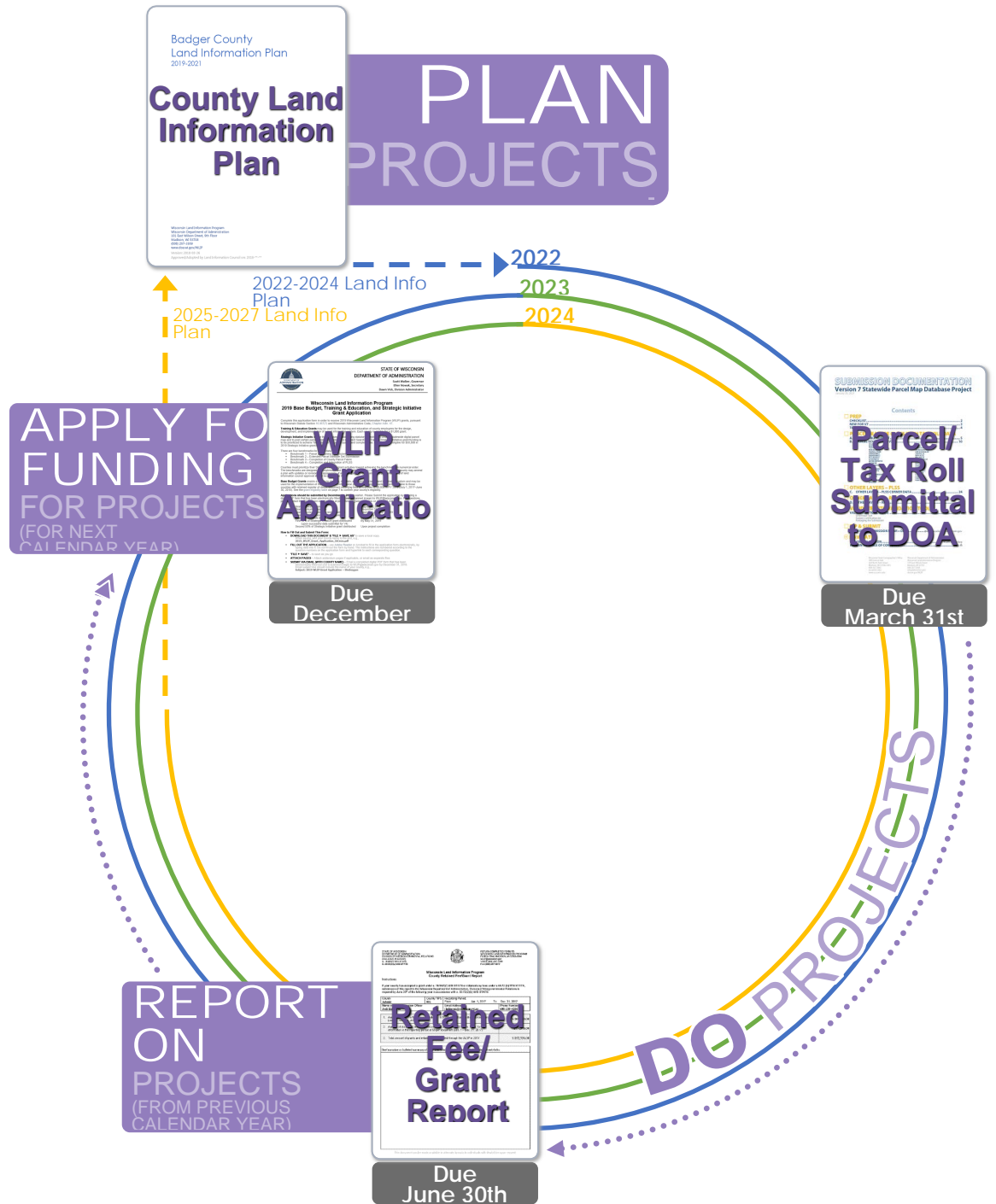


Figure 1. The WLIP Land Information Plan/Grant Project Cycle – For the Years 2021-2024

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

To maintain the Searchable Format standard, the county will continue to have a combination of staff and a consultant to convert the data to the searchable format required by the WLIP. This is considerably easier to do than to make a large switchover of our current software and data schema. The consultant has developed a program that runs through the data and makes the needed changes. As the WLIP requirements change we makes the needed changes to the programming. The staff then QA/QC the data for errors and do any final changes to anomalies. Typically this is less than 100 data records of nearly 50,000.

- **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. (See Description Above)

Business Drivers

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

Objectives/Measure of Success

The objective is to continue to meet the Searchable Format for Benchmarks 1 & 2 (Parcel and Zoning Data Submission, Extended Parcel Attribute Set Submission).

Project Timeframes

Timeline – Project Plan to Maintain Searchable Format

Milestone	Duration	Date
Project start	–	January 1, 2022
Gather data	1 month	January 1-30, 2022
Contractor formats data	1 month	February 1-28, 2022
Project complete	–	March 31, 2022

- This project repeats annually

Responsible Parties

- Douglas County Land Information Office Staff

Estimated Budget Information

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

Project Plan for Parcel Completion (Benchmark 3)

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

Project Description/Goal

Current status of parcel data

- **Current status of parcel data in the county:** 99.9%
- **Tally of the total number of parcels in digital format:** 47,676
- **Estimated number of parcels yet to be digitized:** 270

Goals

- **Number of parcels to be added for the grant project period(s):** 30

Planned approach

- Douglas County has a close to complete parcel fabric, we are currently adding missing parcels as they are researched to the fabric. We are also working on accuracy issues from the parcel development period brought into the parcels from poorly constructed Town, Range, Section data that was used. Therefore while nearly complete some areas are considerably inaccurate. Newly remonumented corners are being used to clean up the data inaccuracies and make the parcel fabric more accurate. Douglas County identifies areas of concern, remonument the areas and then reworks the parcel fabric for a higher accuracy.

Business Drivers

- The Project Plan for Parcel Completion is a requirement for those counties who utilize Strategic Initiative funds for work related to digital parcel map completion.
- Internal and external users of Counties parcel data anticipate a high level of accuracy and most current data available
- Meeting requirements of the State of Wisconsin’s Parcel Mapping Initiative goals and objectives

Objectives/Measure of Success

- The objective is to meet Benchmark 3 (Completion of County Parcel Fabric) by December 2030
- A fully functioning Parcel Fabric built on ESRI’s Land Information Model
- Implementation of Parcel Editing Standard
- Acquisition of additional editing staff, FTE and GIS Consultant
- A completed parcel layer built on survey grade PLSS coordinates
- Success is largely is determined on the PLSS Remonumentation efforts
- A end product that meets the requirements of the State of WI Parcel Initiative

Project Timeframes

Timeline – Project Plan for PLSS

Milestone	Duration	Date
Project start	–	January 1, 2022
Hire contractor	1 month	January 1-31, 2022
Contractor Remonumentation	1 year	Yearly
Project complete	–	December 31, 2022

- This project repeats annually

Responsible Parties

- Douglas County Land Information Office Staff

Estimated Budget Information

- See table at the end of this chapter.

Project Plan for PLSS (Benchmark 4)

Project Title: Project Plan for PLSS (Benchmark 4)

Project Description/Goal

Planned Approach

Remonumentation of PLSS lost and obliterated corners. Survey grade coordinates on existing remonumented PLSS corners. Accurate coordinates on the PLSS corners in Douglas County is the only way to achieve higher accuracy of the parcel layer.

Current Status

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

Goals

- **Number of corners to be remonumented and/or rediscovered:** 100/Year
- **Number to have new coordinates established:** 100/Year
- **Accuracy class for these new coordinates:** Survey Grade
- **Way in which these points will be integrated into the parcel fabric:** All new corner coordinates will be added to the parcel fabric to provide greater accuracy to the parcel geometries

Missing Corner Notes

- **Documentation for any missing corner data:** 1678, 38% of the corners in Douglas County have been lost or obliterated since they were set

County Boundary Collaboration

- Douglas County has worked with Washburn, Bayfield and Burnett counties to collaborate on county boundary collection. Douglas County has also worked with Pine County of Minnesota to collaborate on the MN/WI state boundary line and plans to continue to collaborating with these entities.

Business Drivers

- County has 48% of the PLSS Corners Integrated in the Parcel Fabric
- The Project Plan for PLSS is a requirement for those counties who utilize Strategic Initiative funds for work related to PLSS completion and integration.
- County has 61% of the PLSS corners with U.S. Public Land Survey Monument Record Sheets and 54% have survey grade coordinates.
- County has invested \$30,000 (Douglas County Capital Improvements) per year over the last eight (8) years for remonumentation projects
- The County pays Surveyors a “bounty” for corners remonumented each year, in 2021 30 corners were turned in for the bounty
- A weighted control system of PLSS corners was developed and incorporated into the GIS for strategic mission planning and determining project areas.
- U.S. Public Land Survey Monument Record sheets will be available online and accessible on County survey site.

Objectives/Measure of Success

- The objective is to meet Benchmark 4 (Completion and Integration of PLSS) by 2030 date.
- The intent is to obtain as many survey-grade coordinates on PLSS corners that will affect the accuracy of the highest density of parcels.
- PLSS survey-grade coordinates as provided by Professional Land Surveyors will be incorporated in the PLSS Control Layer in the Parcel fabric allowing individual parcels to be adjusted.

Project Timeframes

Timeline – PLSS (Benchmark 4)

Milestone	Duration	Date
Obtaining survey grade coordinates and remonumentation on PLSS corners.	–	January 1 – December 31, 2022
Integrate PLSS control into parcel fabric	monthly	
Index tie sheet and other survey records	As completed	
Project complete	–	Dec 31, 2024

This project repeats annually

Responsible Parties

- Douglas County Land Information Staff
- The County Surveyor will administrate the Remonumentation project. Local private Professional Land Surveyors and in-house County staff will be doing the necessary fieldwork and drafting U.S. Public Land Survey Monument Record sheets.

Estimated Budget Information

- Note: The County does not use WLIP grant funding or retained fees for this activity

Project #1: Aerial Photo Acquisition

Project Description/Goal

- Implement and maintain the aerial photography on a three year basis so the data remains relevant for current use. When integrated into GIS it is available for all users to access, plan, coordinate, implement and provides accurate decision-making based on the Pictometry data (Oblique and Ortho Photography).
- **Land Info Spending Category:** Capital Improvements

Business Drivers

- Internal and external users of the County’s aerial photography anticipate a high level of accuracy and most current data available.
- Aerial Photography (Ortho and Oblique’s) has been used for decades in Douglas County and continues to be a primary data source for all departments’ basic mapping needs.

Objectives/Measure of Success

- Work with Pictometry
- Coordinate with IT staff for storage location and permissions
- Install software on users computers
- Train the users on use of the data, Pictometry training and in house-training
- Coordinate regional meetings/trainings to bring more users into the Pictometry User Base
- Develop interest and budget for future flights
- Develop an aerial acquisition timeline

Project Timeframes

- Anticipated 2022 flight and continuation of a three year cycle flight schedule. Aerials will be available within 3 months of the flight's completion

Responsible Parties

- County Land Information Office and County Administration

Estimated Budget Information

- See table at the end of this chapter.

Project #2: Maintain and Enhance Web-Based Mapping Sites for Public Use

Project Description/Goal

- Land Info Spending Category: Land Records
- Maintain and enhance web-based mapping sites for public use.
<https://www.douglascountywi.org/869/Land-Records>

Business Drivers

- Public access to data
- Technological enhancements to use developing web technologies

Objectives/Measure of Success

- Public access to GIS data and survey data
- Mobile GIS capabilities
- Linear data document referencing
- Train the users on use of sites

Project Timeframes

- Ongoing Year to Year

Responsible Parties

- Douglas County Land Information Office

Estimated Budget Information

See table at the end of this chapter.

Project #3: Drone: Meet FAA Requirements and Training

Project Description/Goal

- Meet the Federal Aviation Administration’s requirement for Licensing and train staff to use it
- Use the drone for specific small project areas where aerial imaging can be quickly obtained and utilized

Business Drivers

- Public Safety
- Forestry
- Law Enforcement

Objectives/Measure of Success

- Emergency operations like flooding events where damage assessment is needed in a short timeframe
- Accessing remote areas visually from above that would not be possible in any other way
- Assessing Forest stands for health/condition, etc
- Locating missing persons in remote areas

Project Timeframes

- Ongoing Year to Year

Responsible Parties

- Douglas County Land Information Office

Estimated Budget Information

- See table at the end of this chapter.

Project #4: Mobile Applications/Map/REST Services

Project Description/Goal

- Develop a mobile apps and Map/REST Services

Business Drivers

- Mobile Technology is increasing in use and demand for this data in this form is present

Objectives/Measure of Success

- Develop a mobile applications that can be used on various mobile platforms

Project Timeframes

Timeline – Mobile Platbook Application

Milestone	Duration	Date
Develop Mobile App	9 Months	January 1 –October 31, 2022
Test Mobile App	1 Month	November 1 - December 1 2022
Make Available for through online services	1 Month	December 1, - December 31, 2022
Project complete	–	Dec 31, 2022

Responsible Parties

- Douglas County Land Information Office

Estimated Budget Information

- See table at the end of this chapter.

Project #5: NextGen 911 Data Compliance

Project Description/Goal

- Meet the data Federal and State data standards for Next Gen 911

Business Drivers

- Wisconsin is beginning the NextGen 911 data compliance process

Objectives/Measure of Success

- Meeting the Federal and State standards when they are required

Project Timeframes

Timeline – Mobile Platbook Application		
Milestone	Duration	Date
Research the NextGen 911 Standards	3 Months	January 1 –March 31, 2022
Bring data up to the specified Schema and standards	9 Month	April 1 - December 31 2022

Responsible Parties

- Douglas County Land Information Office
- Douglas County Emergency Management Services

Estimated Budget Information

- See table at the end of this chapter.

Estimated Budget Information (All Projects Retained Fees and Grants)

Estimated Budget Information				
Project Title	Item	Unit Cost/Cost	Land Info Plan Citations	Project Total
			Page # or section ref.	
1) Benchmark 1 & 2	GIS Parcel Coordinator	\$10,000 Per year for 3 years	Page 30	\$30,000
	Land Information Specialist	1/2 salary = \$35,000 per year for 3 years	Page 30	\$105,000

2) Benchmark 3	Data base consultant	\$5,500 per year for 3 years	Page 31	\$16,500
	GIS Parcel Coordinator	\$30,700 per year for 3 years	Page 31	\$92,100
3) Benchmark 4				
4) Project #1	Aerial photo flight	\$71,000 per year over 3 years	Page 34	\$213,000
5) Project #2	Maintain web mapping site	\$4,250 per year over 3 years	Page 35	\$12,750
6) Project #3	Drone training and license	\$2000 per year over 3 years	Page 36	\$6,000
7) Project #4	Mobile apps/ Map/REST Services	\$5,000 consultant fee to create apps and Services	Page 37	\$5,000
8) Project #5	NextGen 911 Data Compliance	\$10,000 per year partial funding GIS Tech	Page 38	\$30,000
GRAND TOTAL				\$516,918

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

Completed Projects

- All projects are ongoing