Eau Claire County
Land Information Plan
2022-2024

CONTENTS

EXECUTIVE SUMMARY

About this Document. This document is a land information plan for Eau Claire County prepared by the land information officer (LIO) and the Eau Claire County Land Information Council. Under state statute 59.72(3)(b), a "**countywide plan for land records modernization**" is required for participation in the Wisconsin Land Information Program (WLIP). The purpose of this document is twofold: 1) to meet WLIP funding eligibility requirements necessary for receiving grants and retaining fees for land information, and 2) to plan for county land records modernization in order to improve the efficiency of government and provide improved government services to businesses and county residents.

WLIP Background. The WLIP, administered by the Wisconsin Department of Administration, is funded by document recording fees collected by register of deeds at the county-level. In 2020, Eau Claire County was awarded $41,000 in WLIP grants and retained a total of $192,688.00 in local register of deeds document recording fees for land information.

This plan lays out how funds from grants and retained fees will be prioritized. However, as county budgets are determined on an annual basis with county board approval, this plan provides estimated figures that are subject to change and are designed to serve planning purposes only.

Land Information in Eau Claire 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 Eau Claire 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 and GIS Programs. In the next three years, Eau Claire County's Land Information and GIS Programs will strive to be recognized for its exceptional GIS hub site, gains in governmental efficiencies by broadening the utilization of GIS, improvements in parcel mapping accuracy, and responsiveness to meeting the land records needs of residents and businesses.

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

Eau Claire County Land Information Projects: 2022-2024	
Project #1	PLSS Remonumentation of the East ½ of Eau Claire County
Project #2	Countywide Aerial Imagery
Project #3	Countywide LiDAR
Project #4	Highway Right-of-Way Scan
Project #5	Development of Water-Well Layer
Project #6	Development of POWTS Layer
Project #7	Register of Deeds Back Scanning
Project #8	PLSS Maintenance
Project #9	Obtain unmanned aerial vehicle equipment and software
Project #10	Floodplain Mapping Update
Project #11	Pro-Parcel Fabric Conversion
Project #12	Next Gen 911 GIS Data Cleaning and Formatting
Project #13	Parcel File Scanning
Project #14	Enterprise Upgrade

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

1 INTRODUCTION

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

The WLIP and the Land Information Plan Requirement

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

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

> ## LAND INFORMATION
>
> Any physical, legal, economic or environmental information or characteristics concerning land, water, groundwater, subsurface resources or air in this state.
>
> 'Land information' includes information relating to topography, soil, soil erosion, geology, minerals, vegetation, land cover, wildlife, associated natural resources, land ownership, land use, land use controls and restrictions, jurisdictional boundaries, tax assessment, land value, land survey records and references, geodetic control networks, aerial photographs, maps, planimetric data, remote sensing data, historic and prehistoric sites and economic projections.
>
> *– Wis. Stats. section 59.72(1)(a)*

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

Act 20 and the Statewide Parcel Map Initiative

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

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

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

WLIP Benchmarks (For 2016-2018 Grant Years)
- Benchmark 1 & 2 – Parcel and Zoning Data Submission/Extended Parcel Attribute Set Submission
- Benchmark 3 – Completion of County Parcel Fabric
- Benchmark 4 – Completion and Integration of PLSS

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

County Land Information Plan Process

County land information plans were initially updated every five years. However, as a result of Act 20, counties must update and submit their plans to DOA for approval every three years. The 2019-2021 plan, completed at the end of 2018, is the second post-Act 20 required update.

Plan Participants and Contact Information

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

According to s. 59.72(3m), Wis. Stats., the county land information council is to include:
- Register of Deeds
- Treasurer
- Real Property Lister or designee
- Member of the county board
- Representative of the land information office
- A realtor or member of the Realtors Association employed within the county
- A public safety or emergency communications representative employed within the county
- County surveyor or a registered professional land surveyor employed within the county
- Other members of the board or public that the board designates

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

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

Eau Claire County Land Information Council and Plan Workgroup				
Name	**Title**	**Affiliation**	**Email**	**Phone**
+Tina Pommier	Register of Deeds	Eau Claire County Register of Deeds	tina.pommier@co.eau-claire.wi.us	715-839-4745
+Glenda Lyons	County Treasurer	Eau Claire County Treasurer's Office	glenda.lyons@co.eau-claire.wi.us	715-839-4805
+Roxann Schmidt	Real Property Lister	Eau Claire Co. Planning & Development	roxann.schmidt@co.eau-claire.wi.us	715-839-2984
+Joe Knight	County Board Member	Eau Claire Co. Board of Supervisors	joe.knight@co.eau-claire.wi.us	715-834-6596
+Peter Strand	Land Information Officer GIS Administrator	Eau Claire Co. Planning & Development	peter.strand@co.eau-claire.wi.us	715-831-4730
+Bruce King	Realtor	REALTORS® Association of Northwestern Wisconsin	bruce@ranww.org	715-828-1976
+Dena Clark	Public Safety Officer	Eau Claire Emergency Center	dena.clark@EauclaireWi.Gov	715-839-1690
+Dean Roth	County Surveyor	Eau Claire Co. Planning & Development	dean.roth@co.eau-claire.wi.us	715-839-4742
+Shana Harmsen	GIS Administrator	City of Eau Claire	Shana.Harmsen@eauclairewi.gov	715-839-4934

+ Land Information Council Members designated by the plus symbol

2 FOUNDATIONAL ELEMENTS

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

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

FOUNDATIONAL ELEMENTS

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

PLSS

Public Land Survey System Monuments

Layer Status

PLSS Layer Status	Status/Comments
Number of PLSS corners (selection, ¼, meander) **set in original government survey** that can be remounmented in your county	• 2069
Number and percent of PLSS corners capable of being remounmented in your county that **have been remounmented**	• 1496 (72%)
Number and percent of remounmented PLSS corners with survey grade coordinates (see below for definition) • **SURVEY GRADE** – coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision • **SUB-METER** – point precision of 1 meter or better • **APPROXIMATE** – point precision within 5 meters or coordinates derived from public records or other relevant information	• 1496 (72%)
Number and percent of survey grade PLSS corners integrated into county digital parcel layer	• 1330 (64%)
Number and percent of non-survey grade PLSS corners integrated into county digital parcel layer	• 677 (32%)
Tie sheets available online?	• Yes http://eauclairecowi.wgxtreme.com/
Percentage of remounmented PLSS corners that have **tie sheets available online** (whether or not they have corresponding coordinate values)	• 72%
Percentage of remounmented 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	• 72%
PLSS corners believed to be remounmented based on filed tie-sheets or surveys, but do not have coordinate values	• 33%
Approximate number of PLSS corners believed to be lost or obliterated	• Indeterminate
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)?	• ** Romportyl
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	• 180
Number and percent of PLSS corners remounmented along each county boundary	• 118
Number and percent of remounmented PLSS corners along each county boundary with survey grade coordinates	• 118
In what ways does your county collaborate with or plan to collaborate with neighboring counties for PLSS updates on shared county borders?	• Our County shares monument records with all surrounding Counties whenever a monument or its accessories are replaced.

Custodian
- Public Land Survey System Monuments and monument records are retained by the Eau Claire County Surveyor's Office within the Department of Planning and Development.

Maintenance
- The Public Land Survey System is maintained continuously.

Standards
- Statutory Standards for PLSS Corner Remounmentation

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 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.

Other Geodetic Control and Control Networks
e.g., HARN, Height Mod., etc.
Layer Status
- Eau Claire County does not have other geodetic control

Parcel Mapping

Parcel Geometries
Layer Status
- **Progress toward completion/maintenance phase:**
Eau Claire County is 100% parcel mapped referenced to the PLSS network and entered using coordinate geometry. The parcels are maintained within the ESRI Parcel Fabric in a multiuser enterprise database. As the county's remonumentation program completes sections, those sections are re-parcel mapped increasing spatial accuracy and alignment with PLSS monumentation. Eau Claire County parcel polygons are attributed with two parcel identification numbers, which directly integrates tax/assessment data. Parcels are available in a commonly-used digital GIS format.
- **Projection and coordinate system:**
NAD_1983_2011_WISCRS_Eau_Claire_Feet
- **Integration of tax data with parcel polygons:**
The county does have a parcel polygon model that directly integrates tax/assessment data as parcel attributes.
- **Online Parcel Viewer Software/App and Vendor name:**
Eau Claire County host several online mapping applications which utilize parcels within our GIS Hub Site
The county continues to use the WebGUIDE Xtreme product hosted by Applied Data Consultants.
- **Unique URL path for each parcel record:**
Yes- Example: https://ascent.co.eau-claire.wi.us/LandRecords/PropertyListing/RealEstateTaxParcel#/Details/XXXXX

Custodian
- The GIS Division within the Department of Planning and Development.

Maintenance
- **Update Frequency/Cycle:**
Parcel data is maintained constantly as needed.

Standards
- **Data Dictionary:**
Eau Claire County maintains a Data Dictionary for the parcel data. National Map Accuracy Standards Confirm the presence of data dictionary in human-readable form, with thorough definitions for each element/attribute name, and explanations of any county-specific notations, particularly for parcel attributes listed by s. 59.72(2)(a) (This is real property file).

Assessment/Tax Roll Data

Layer Status

- **Progress toward completion/maintenance phase:** NA
- **Tax Roll Software/App and Vendor name:** Ascent Land Records Suite
- **Municipal Notes:** Eau Claire County contains 17 municipalities for which we maintain data. The City of Eau Claire is the only municipality that maintains its own property data.

Custodian

- Real Property Lister

Maintenance

- **Maintenance of the Searchable Format standard:** To maintain the Searchable Format standard, the county will continue to create exports within our land information/records systems that support the Searchable Format standard.

Standards

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

Non-Assessment/Tax Information Tied to Parcels

Non-Metallic Mining

Layer Status

- Non-Metallic Mining is maintained as an attribute of Parcels

Custodian

- The GIS Division within the Department of Planning and Development.

Maintenance

- Parcel data is maintained constantly as needed.

Standards

- County Parcel Standard

ROD Real Estate Document Indexing and Imaging

Layer Status

- **Grantor/Grantee Index:** Digitized from October 1989 to present. Prior to 1989-Microfiche, prior to March 1986-paper index.
- **Tract Index:** PLSS based index-Computerized tract from October 1989 to present, recording conveyances of real property, mortgages, etc.
- **Imaging:** Documents imaged 1963 to present available online.
- **ROD Software/App and Vendor Name:** Laredo/Tapestry-from 1989 contractor-Vendor Fidlar

Custodian

- County Register of Deeds

Maintenance

- Replication located offsite with staff and software vendor assistance with quality control/technology advances.

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:** 2020

- **Accuracy:** Vertical Accuracy Specifications per USGS QL2 level:
  - LAS: NVA equates to 10 cm RMSEz, or 19.6 cm (0.64 ft) at the 95% confidence level
  - DEM: NVA equates to 10 cm RMSEz, or 19.6 cm (0.64 ft) at the 95% confidence level. VVA equates to 29.4 cm (0.96 ft) at the 95th percentile
- **Post spacing:** Nominal Point Spacing: 0.7 meters
- **Contractor's standard, etc.:** Ayres primary and Quantum Spatial (now NV5 Geospatial) as lidar acquisition partner
- **Next planned acquisition year:** 2026
- **QL1/QL2 acquisition plans:** Not Determined

Custodian
- The GIS Division within the Department of Planning and Development.

Maintenance
- None

Standards
- USGS QL2

LiDAR Derivatives
e.g., Bare-Earth Digital Terrain Model (DTM), Bare-Earth Elevation Contours, Bare-Earth Digital Elevation Model (DEM), Digital Surface Model (DSM), etc.
Layer Status
- The calibrated 2020 LiDAR data was processed to a classified point cloud in LAS file format, bare earth LAS & XML & DTM, DEM, 1-foot contours, hydro breaklines, and intensity images.
- The DEM was processed by Eau Claire County to obtain multiple slope classification layers.
- Eau Claire County did not acquire a Hydro enforced DEM

Custodian
- The GIS Division within the Department of Planning and Development.

Maintenance
- None

Standards
- FEMA and USGS lidar base spec v1.0 vertical accuracy specifications of the time.

Other Types of Elevation Data
Layer Status
- The County does not maintain other types of elevation data.

Orthoimagery
Orthoimagery
Layer Status
- **Most recent acquisition year:** 2020
- **Resolution:** 0.5 foot ground sample distance (GSD) orthoimagery to meet ASPRS Class II horizontal accuracy specifications at 1" = 100' map scale
- **Contractor's standard:** 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:** 2020

Custodian
- The GIS Division within the Department of Planning and Development.

Maintenance

- None

Standards

- 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.

Historic Orthoimagery

Layer Status

- Partial coverage exists for 2004, 2005, and 2006.
- Full coverage exists for 1980, 2013, and 2018.

Custodian

- The GIS Division within the Department of Planning and Development.

Maintenance

- None

Standards

- Unknown

Other Types of Imagery
e.g., Oblique Imagery, Satellite Imagery, Infra-red, etc.

Layer Status

- Infra-red orthophoto exists for 2006 covering the area of the City of Eau Claire and surrounding areas.

Custodian

- The GIS Division within the Department of Planning and Development.

Maintenance

- None

Standards

- Unknown

Address Points and Street Centerlines

Address Point Data

Layer Status

- Eau Claire County maintains two Address Point layer. In the area outside of the City of Eau Claire we maintain an Access Address point. These points are created along the street centerline at the driveway access point of the parcel. We also maintain a Structure Address point. These points are maintained within the footprint of the structure.
- Address Points are maintained within an ESRI SDE database.
- Address point layer is used for 911 dispatch.

Custodian

- The GIS Division within the Department of Planning and Development.

Maintenance

- Address point data is maintained daily as needed.

Standards

- County addressing in not maintained within the Wisconsin GIS NG9-1-1 Data Standard

Building Footprints
Layer Status
- Eau Claire County received building footprints as a deliverable of the county's 2013 and 2020 LiDAR flights.

Custodian
- The GIS Division within the Planning and Development Department.

Maintenance
- None

Standards
- 2020- USGS QL2
- 2013-LiDAR data was collected to support FEMA accuracy standards and to support generation of 2-foot contours.

Other Types of Address Information
e.g., Address Ranges
Layer Status
- Address Ranges are maintained as an attribute of street centerlines

Custodian
- The GIS Division within the Department of Planning and Development.

Maintenance
- Street Centerlines data is maintained daily as needed.

Standards
- County addressing conforms to USPS and NENA standards.

Street Centerlines
Layer Status
- Eau Claire County maintains a Master Centerline layer.   Master Centerline features are fully attributed with address ranges to enable 911 dispatch and network routing.
- Master Centerline is maintained within an ESRI SDE database.
- Master Centerline layer is used in the assigning of address points and for 911 dispatch.

Custodian
- The GIS Division within the Planning and Development Department.

Maintenance
- Master Centerline data is maintained daily as needed.

Standards
- Master Centerline data was created with NENA standards

Rights of Way
Layer Status
- Starting in 2017 all new TPP plats are COGO'ed into the county's parcel fabric. TPPs are maintained as a survey polygon type.
- Eau Claire County maintains all other Right of Way layer as part of the parcel mapping maintenance process.

Custodian
- The GIS Division within the Planning and Development Department.

Maintenance
- Right of Way data is maintained daily as needed.

Standards
- National Map Accuracy Standards

Trails

e.g., Recreational Trails, Snowmobile Trails

Layer Status

- Recreational trail data has been created for various activities including snowmobiling, hiking, cycling, cross country skiing, and horseback riding.

Custodian

- The GIS Division within the Planning and Development Department and the Parks and Forest Department

Maintenance

- Tail data is currently being maintained in several locations, however, there is a current project to re-model how and where tail data is maintained at the county.

Standards

- County-based standards are utilized.

Land Use

Current Land Use

Layer Status

- Eau Claire County maintains current land use codes in the Accent Tax System.

Custodian

- The Planning Division within the Planning and Development Department.

Maintenance

- Land use codes are updated annually.

Standards

- County-based standards are utilized, assigning a two or three letter code to each land use category.

Future Land Use

Layer Status

- Eau Claire County maintains a Future Land Use layer. It was created during the comprehensive planning process.

Custodian

- The GIS Division within the Planning and Development Department.

Maintenance

- The Future Land Use layer is maintained daily as needed.

Standards

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

Zoning

County General Zoning

Layer Status

- The County <u>does</u> maintain a GIS representation of county general zoning boundaries. The County maintains general zoning as an attribute of parcels. This attribute is then replicated into the Assent Tax System nightly.

Custodian

- Zoning data is maintained by the GIS Division within the Planning and Development Department. The Land Use Controls Division of Planning and Development Department is

responsible for the administration and enforcement of the zoning code and related programs for the unincorporated areas of Eau Claire County.

Maintenance
- Zoning data is maintained daily as needed.

Standards
- National Map Accuracy Standards

Shoreland Zoning

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

Custodian
- Zoning data is maintained by the GIS Division within the Planning and Development Department. The Land Use Controls Division of Planning and Development Department is responsible for the administration and enforcement of the zoning code and related programs for the unincorporated areas of Eau Claire County.

Maintenance
- Zoning data is maintained daily as needed.

Standards
- State statute is NR 115
- County Statute is Title 20

Farmland Preservation Zoning

Layer Status
- The County does maintain a GIS representation of county farmland preservation zoning boundaries.
- **Year of certification:** 2015

Custodian
- Zoning data is maintained by the GIS Division within the Planning and Development Department. The Planning and Land Conservation Divisions of Planning and Development Department is responsible for the administration of Farmland Preservation Program.

Maintenance
- Zoning data is maintained daily as needed.

Standards
- Chapter 91, Subchapter 2

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
- FEMA

Maintenance
- Conducted by FEMA

Standards
- FEMA

Airport Protection

Layer Status

- The County does maintain a GIS representation of airport protection zoning boundaries.
- **Airport protection zoning map depicts:** Height limitation restrictions and the general zoning overlay for airport protection

Custodian

- Airport Zoning data is maintained by the GIS Division within the Planning and Development Department

Maintenance

- This data was updated and adopted in 2002, 2007, 2013.

Standards

- Wis. Stats. 59.03, 59.04, 59.69, 59.694, 114.14 and 114.136

Administrative Boundaries

Civil Division Boundaries

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

Layer Status

- Eau Claire County maintains a Civil Divisions layer which includes towns, city, and villages.

Custodian

- The GIS Division within the Planning and Development Department.

Maintenance

- Civil Divisions data is maintained daily as needed.

Standards

- National Map Accuracy Standards

School Districts

Layer Status

- **Progress toward completion/maintenance phase:** Eau Claire County has created a School District Boundary file.
- **Relation to parcels:** Eau Claire County maintains a school district code on all parcels in the Ascent Land Records Suite software.
- **Attributes linked to parcels:** School district codes are maintained for each parcel.

Custodian

- Real Property Lister

Maintenance

- School district codes are maintained daily as needed.

Standards

- National Map Accuracy Standards

Election Boundaries

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

Layer Status

- Eau Claire County maintains a Ward data layer countywide.

Custodian

- Ward data is maintained by the GIS Division within the Planning and Development Department.

Maintenance
- Ward data is maintained daily as needed.

Standards
- National Map Accuracy Standards

Utility Districts
e.g., Water, Sanitary, Electric, etc.
Layer Status
- Eau Claire does not have a Utility Districts layer

Emergency Service Boundary – Law/Fire/EMS
Layer Status
- **Law Enforcement:** The Eau Claire Emergency Communications Center maintains data for law enforcement.
- **Fire:** The Eau Claire Emergency Communications Center maintains data for fire.
- **EMS:** The Eau Claire Emergency Communications Center maintains data for EMS.

Custodian
- These layers are maintained by the Eau Claire Emergency Communications Center.

Maintenance
- This data is maintained on a regular basis.

Standards
- City and County based standards are utilized. (Emergency Service Boundary)

Public Safety Answering Points (PSAP) Boundary
Layer Status
- **PSAP Boundary:** The Eau Claire Emergency Communication Center maintains data for the Public Safety Answering Point (PSAP) Boundary.

Custodian
- These layers are maintained by the Eau Claire Emergency Communications Center.

Maintenance
- This data is maintained on a regular basis

Standards
- City and County based standards are utilized. (PSAP Boundary)

Provisioning Boundary
Layer Status
- The Eau Claire Emergency Center maintains data for the Provisioning Boundary.

Custodian
- These layers are maintained by the Eau Claire Emergency Communications Center.

Maintenance
- This data is maintained on a regular basis.

Standards
- City and County based standards are utilized. (Provisioning Boundary)

Lake Districts
Layer Status
- The County maintains a lake district code on each parcel located within one of five lake districts in the Ascent Land Records Suite software. Each district is responsible for maintaining the mapping of their respective district.

Custodian
- Real Property Lister

Maintenance
- As need

Standards
- NA

Native American Lands
Layer Status
- Eau Claire does not have a Native American Lands layer

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
- Eau Claire County maintains its own hydro layers. The hydrography information was compiled by directly digitizing water features off 1995 and 2006 digital orthophotographs. All water body names were transferred from WI DNR 24K Hydro and simple hydro area shapefiles. Upon completion of the western half of the county, a file was sent to the Department of Natural Resources for review to determine which of the water features are navigable versus non-navigable. Edits were made to the file based on their efforts.

Custodian
- The GIS Division within the Planning and Development Department

Maintenance
- Hydro data is maintained daily as needed.

Standards
- County-based standards are utilized.

Cell Phone Towers
Layer Status
- None

Bridges and Culverts
Layer Status
- In 2018 Eau Claire County conducted a Highway Asset Inventory Project. This project included the collection of bridge data
- Eau Claire County is currently constructing a culvert layer.

Custodian
- County Highway Department

Maintenance
- Data is maintained as needed

Standards
- County-based standards are utilized.

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

Layer Status
- NA

Custodian
- NA

Maintenance
- NA

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
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
- Eau Claire County's GIS runs on a virtual machine.
- Currently it is an Intel(R) Core(TM) i7-8700K CPU @ 3.70GHz   3.70 GHz with 16.0 GB RAM

Software
- Windows server 2016 R2 x64-bit
- SQL Server 2016
- ESRI ArcGIS 10.8
- ESRI ArcGIS Pro 2.8

Website Development/Hosting
- County GIS hub site: https://hub-eccounty.hub.arcgis.com/
- WG Xtreme: http://eauclairecowi.wgxtreme.com/

Metadata and Data Dictionary Practices

Metadata Creation
- **Metadata creation and maintenance process:** Metadata is maintained for all of our GIS publication layers

Metadata Software
- **Metadata software:** ArcCatalog
  - ArcCatalog generates metadata consistent with the FGDC Content Standard for Digital Geospatial Metadata, and ISO geographic metadata standard 19115.
- **Metadata fields manually populated:**
  - As needed fields are populated manually

Metadata Policy
- **Metadata Policy:** No formally adopted policy

Municipal Data Integration Process
- Eau Claire County integrates the City of Eau Claire's parcels for submittal to DOA annually.

- Eau Claire County and the City of Eau Claire currently jointly maintain a single 911 Centerline and Address Point Geodatabase utilized by the dispatch center.

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
http://eauclairecowi.wgxtreme.com/	https://hub-eccounty.hub.arcgis.com/pages/open-data	http://eauclairecowi.wgxtreme.com/	www.landrecords.net

Single Landing Page/Portal for All Land Records Data
URL
https://hub-eccounty.hub.arcgis.com/pages/open-data

Municipal Website Information

Municipal Website	Municipal Website URL
City of Eau Claire	https://eauclairecitywi.wgxtreme.com/

Data Sharing

Data Availability to Public

Data Sharing Policy

- All of our land information is open data and is freely distributed.

Open Records Compliance

- Eau Claire County Complies with Wisconsin's Open Records Law

Data Sharing Restrictions and Government-to-Government Data Sharing

Data Sharing Restrictions

- None

Government-to-Government Data Sharing

- No Restrictions

Training and Education

- Eau Claire County is dedicated to training and education. It's the best way to ensure we're getting the most from our Land Information investment. County staff take advantage of training opportunities attending local, state, and national conferences and meetings. This abundance of user-to-user communication and collaboration is essential to learning about real-life GIS experiences, best practices, tips and tricks, and more.
- County staff are also active members of Wisconsin Land Information Association, Wisconsin Land Information Officers Network, Wisconsin Real Property Listers Association, Register of Deeds Association, Wisconsin Society of Land Surveyors, Wisconsin County Surveyors Association, and more

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.
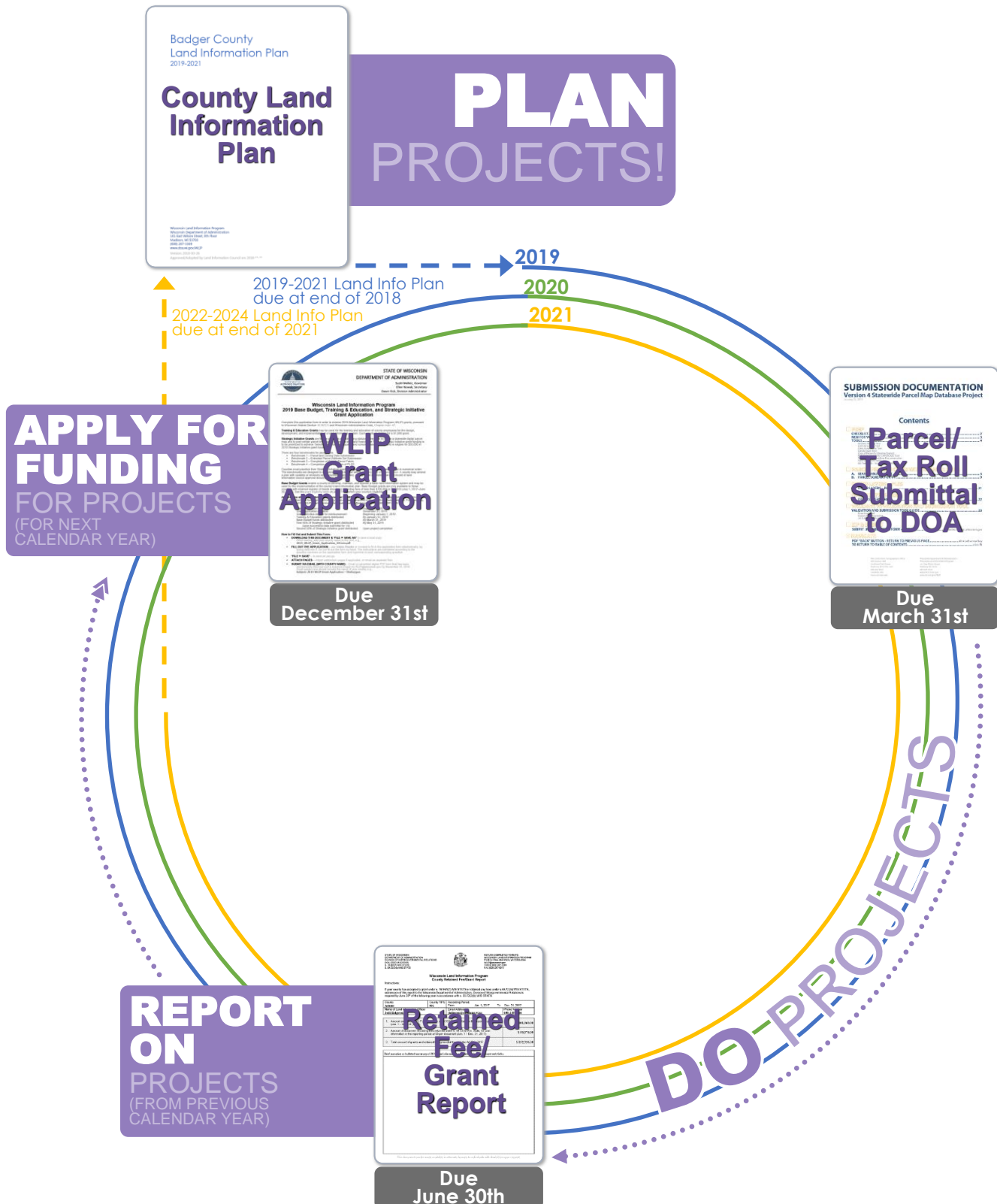

Figure 1. The WLIP Land Information Plan/Grant Project Cycle

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

- Eau Claire County will be replacing our current ACS AO software used for Real Property Listing. A requirement for our new software system with be an export in DOA's searchable format for Benchmarks 1 & 2.

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 **Example**		
Milestone	**Duration**	**Date**
Project start	–	January 1, 2019
Gather data		TBD
Contractor formats data		TBD
Project complete	–	September 2020

Responsible Parties

- Eau Claire County's Information Systems Department will be the lead on this project. They will select a vendor and coordinate the project.

Estimated Budget Information

- None

Project Description/Goal

Planned Approach

Eau Claire County Surveyor's Office staff will examine the records pertaining to those PLSS monuments in the eastern half of Eau Claire County, continuing efforts in Town 26 North, Range 6 West. The existing monuments will be visited in the field and will be either accepted as-monumented or placed at the location indicated by the best available evidence of the position of the original BLM placed section or quarter corners. At the time of the visits, survey grade coordinates will be collected for the monument, witness marks, or control points used to derive the above. Those monumented positions will be preserved on PLSS monument records along with the full history of the referenced corner. The corner information collected will be imported to CAD and act as the framework upon which parcel information shall be placed before integration to the county GIS. Each new (geographic) project area would represent approximately 12-18 months of labor, mapping and proofing.

Current status

The western two-thirds of the county (Ranges 7, 8, 9, and 10 West) has been completed with Towns 25 North, Range 6 West also complete and of Town 26 North, Range 6 West having been fully visited.   All perpetuated corners have survey-grade coordinates. The Assistant Surveyor (Surveyor II) position is currently paused/vacant and is anticipated to be refilled in 2022.

Goals

The primary goal of this project is completion of the remonumenation of the PLSS in Eau Claire County after which time we may move into maintenance mode for preserved corners.

Missing corner notes

Corners in the remonumentation project area will be replaced using best available evidence for their location. There are corners that fall in water and meander corners will preserve these corner positions.

County boundary collaboration

Eau Claire County is pleased to work with surrounding counties to correctly perpetuate PLSS monuments along shared boundaries and will provide information during and after any project is undertaken along these shared boundaries.

Business Drivers

- This project plan is a requirement for Strategic Initiative grant eligibility.
- Additionally, any landowner or user of real property information; business, private or public, will benefit from this continued development of accurate and up to date land information. Departments affected include, but are not limited to: Parks and Forests, Highway, Planning and Development, Register of Deeds, Treasurer, Department of Natural Resources and the Sheriff's department for dispatch.

Objectives/Measure of Success

A remonumentation project of this nature and detail will have numerous milestones:

- Assembly of PLSS history for project area.
- Field verification of existing monuments.
- Gathering of evidence used to accept or decline existing monuments.
- Replacing or remonumenting of section corners as needed.
- Establishing survey grade coordinates for correctly perpetuated section corners.
- Setting references and creating PLSS monument records (tie sheets) for each completed section corner.
- Incorporating section corner information into the base parcel map in our GIS.

Project Timeframes

Each project area is 18 to 36 PLSS Sections. We complete this in one calendar year from the commencement of the project period. At this rate the PLSS Benchmark 4 will be completed in 2027.

A project year would consist of: (2019 shown as example)

Milestone	Duration	Date
Project #2 start	–	March 1, 2019
Assemble corner records for each PLSS corner to be visited	1 month	March 1 –April 1, 2019
Visit and verify PLSS Corners	6 months	April–October, 2019
Draft PLSS Monument Records	3 months	Oct 1–Dec 31, 2019
Create base parcel maps (section breakdowns) for project area	2 months	Nov1-Dec 31, 2019 (concurrent with drafting of PLSS monument records)

Responsible Parties

County Surveyor –Project oversight and quality assurance.
Hired Staff OR Contracted surveying services.

Estimated Budget Information

Project	Item	Unit Cost	Cost	Total Project Cost
Assembling of records	Surveyor/ Assistant Surveyor	$6,000		$6,000
Visit and verify monuments in field	Surveyor/ (bid) contractor	$24,000		$24,000
Collect Survey-grade coordinate values on perpetuated PLSS corners	Surveyor/ (bid) contractor	$10,000		$10,000
Draft PLSS Monument records	Surveyor/ (bid) contractor	$5,000		$5,000
Create base parcel maps for project area	Surveyor/ (bid) contractor	$5,000		$5,000
			GRAND TOTAL	**$ 50,000**

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

Project #2: Countywide Aerial Imagery

Project Description/Goal

- The primary objective of this project is to acquire new 6-inch resolution digital orthoimagery for Eau Claire County. Orthoimagery benefits a wide range of users of geospatial data, including private industry, public agencies, nongovernmental organizations, citizens, and educational institutions.
- **Land Info Spending Category:**
  - Digital Parcel Mapping
  - PLSS
  - Zoning Work
  - Address Points
  - Street Centerlines

Business Drivers

- The primary business drivers are as follows:
  - Provide a high accuracy base map for parcel mapping and data analysis.
  - Aid in various planning and engineering activities, saving time in informing public decisions.
  - Support Emergency Management's planning and response.
  - Save time in locating and responding to 911 emergencies.

- Avoid the cost of erroneous information from out of date imagery and map features

Objectives/Measure of Success
- 100% of the 648 square miles of Eau Claire County are flown with Leaf-off Spring conditions.
- 6-inch natural color images that are free of snow, ice, fog, and clouds.
- Imagery with a sun angle greater than 30 degrees.

Project Timeframes
- 2023

Responsible Parties
- The GIS Division staff will be responsible for the project

Estimated Budget Information
- See table at the end of this chapter.

Project #3: Countywide LiDAR

Project Description/Goal
- The primary objective of this project is to acquire new LiDAR data for Eau Claire County. LiDAR (Light Detection and Ranging) is an aerial survey technology that uses laser pulses to measure surfaces and objects in three dimensions.
- **Land Info Spending Category:**
    - LiDAR

Business Drivers
- Changing landscapes – Evaluate, compare, and analyze change when comparing against previous data.
- Updated floodplain mapping
- Emergency response
- Cut and fill analysis in non-metallic mining
- Stormwater management
- Asset management
- Forest canopy analysis

Objectives/Measure of Success
- Full LiDAR dataset

Project Timeframes
- 2026

Responsible Parties
- The GIS Division staff will be responsible for the project

Estimated Budget Information
- See table at the end of this chapter.

Project #4: Highway Right-of-Way Scan

Project Description/Goal
- Develop a county-wide digital system for right-of-way documents. These documents are used by several county departments and are difficult to access.
- **Land Info Spending Category:**
    - PLSS
    - Parcel Mapping

Business Drivers
- Ensure the Survey and GIS programs have access to up-to-date and accurate information

Objectives/Measure of Success
- Scanning, organizing, and cataloging all of the county's right-of-way documents

Project Timeframes
- 2019

Responsible Parties
- The GIS Division
- The County Surveyor
- The Highway Department

Estimated Budget Information
- See table at the end of this chapter.

Project #5: Development of Water-Well Layer

Project Description/Goal
- Determine the location and characteristics of Water-Wells in Eau Claire County.
- **Land Info Spending Category:**
    - Data Development

Business Drivers
- Determine water-well location, depth, construction, water level, local geology, driller and original owner.
- Gain a better understanding of the local conditions

Objectives/Measure of Success
- Determine the location and characteristics of Water-Wells in Eau Claire County.
- Link well location to water quality testing results.

Project Timeframes
- 2022

Responsible Parties
- The GIS Division
- Eau Claire City-County Health Department

Estimated Budget Information
- See table at the end of this chapter.

Project #6: Development of POWTS Layer

Project Description/Goal
- Determine the location and characteristics of Private On-Site Wastewater Treatment System (POWTS) in Eau Claire County.
- **Land Info Spending Category:**
    - Data Development

Business Drivers
- Properly treat or contain human waste to avoid becoming hazardous to human health or polluting the environment.

Objectives/Measure of Success
- Determine the location and characteristics of POWTS in Eau Claire County.
- Link POWTS location to permits and pumping records.

Project Timeframes
- 2022

Responsible Parties
- The GIS Division staff will be responsible for the project
- Eau Claire City-County Health Department

Estimated Budget Information
- See table at the end of this chapter.

Project #7: Register of Deeds Back Scanning

Project Description/Goal
- Scan real estate documents from 1963 back and import images for online access/preservation of record.
- **Land Info Spending Category:** Register of Deeds documents

Business Drivers
- Online availability for government agencies, business partners and general public use.

Objectives/Measure of Success
- Scan and index all recorded land record documents. Images replicated providing back-up offsite.

Project Timeframes
- 2020-2023 / scanning and importing images.

Responsible Parties
- Register of Deeds staff will manage record quality and accuracy.

Estimated Budget Information
- See table at the end of this chapter.

Project #8: PLSS Maintenance

Project Description/Goal
- Eau Claire County has invested heavily in remonumentation/retracement efforts perpetuating the PLSS monuments in the West two-thirds of the County in Ranges 7, 8, 9 and 10 West. It is essential that these monuments be visited periodically to ensure they and their reference ties remain in good condition and can be useful for future generations. We have begun, and will continue, to revisit these monuments either using internal staff or contractors and update the PLSS records to reflect the most recent visit.
- **Land Info Spending Category:**
    - PLSS

Business Drivers
- Any landowner or user of real property information; business, private or public, relies on the continued development of correct and maintained PLSS corner information.
- Departments affected include, but are not limited to: Parks and Forests, Highway, Planning and Development, Register of Deeds, Treasurer, Department of Natural Resources and the Sheriff's Department for dispatch.

Objectives/Measure of Success
- All corner monuments placed based on best available evidence of original PLSS corner location.
- All monuments established have survey-grade coordinates.
- All corner monuments have at least 4 reference ties.
- All corners in the county have a PLSS monument record on file the Surveyor's Office.

Project Timeframes
- Efforts will be ongoing.

Responsible Parties

- The Eau Claire County Surveyor's Office and any contractors involved.

Estimated Budget Information

- See table at the end of this chapter.

Project #9: Obtain unmanned aerial vehicle equipment and software

Project Description/Goal

- Purchase an unmanned aerial vehicle UAV and software to assist with emergency management, rezonings, county highway reconstruction projects, non-metallic mines, and nutrient management plan sites.
- **Land Info Spending Category:**
  - Other

Business Drivers

- In the event of flooding, storm damage, or other emergency event we would use UAS to survey the extent of the disaster, actively assist in evacuations, and general damage assessment
- Planning and Development staff spend hours on sites walking and trying to view properties. Mine sites and farm fields need to be monitored by staff to comply with permits and county ordinances.
- Video and photos for sites would provide recorded documentation to support staff

Objectives/Measure of Success

- Provide invaluable information on scene for an emergency
- Reduce staff time on inspections
- Confirm information submitted by landowners

Project Timeframes

- 2012-2020

Responsible Parties

- GIS, and Land Conservation staff

Estimated Budget Information

- See table at the end of this chapter.

Project #10: Floodplain Mapping Update

Project Description/Goal

- Within Eau Claire County the accuracy of floodplain data does not match current needs. During the FEMA Map Modernization program accurate elevation data was rejected due to a lack of current standards. This resulted in many land owners having their property mapped as unstudied floodplain or Zone A. Eau Claire County has an ambitious goal of the elimination all zone A floodplains in the County.
- **Land Info Spending Category:** Other

Business Drivers

- Much of the floodplain in the county is approximate.
- Floodplain zoning became more challenging after map modernization when many studied floodplains reverted to Zone A.
- Accurate floodplains will reduce unnecessary delays for property owners looking to improve their property.
- Accurate floodplains will allow for better zoning administration and reduce the risk of property loss during a flooding event

Objectives/Measure of Success

- All floodplains in Eau Claire County are studied using modern methods including LiDAR data.

Project Timeframes
- 2019-2021

Responsible Parties
- The Land Use Control and GIS Division staff
- Private Surveying firm – Structure and cross section surveys
- Private Engineering firm – Hydrologic and hydraulic mapping

Estimated Budget Information
- See table at the end of this chapter.

Project #11: Pro-Parcel Fabric Conversion

Project Description/Goal
- The Pro-Parcel Fabric is the next generation of Parcel Management Tool from esri. It is a faster, more flexible solution that uses a less restrictive data model than the previous ArcMap Parcel Fabric and allows the immediate use of a record driven workflow without extensive remapping of data.
- **Land Info Spending Category:**
  - PLSS
  - Parcel Mapping

Business Drivers
- The ArcGIS Parcel Fabric uses web services in the Enterprise, uses standard ArcGIS Pro editing tools, and provides advanced quality control through attribute and topology rules while using the standard editing tools contained in ArcGIS Pro.
- Branch versioning enables enhanced editor tracking, in which every edit is tracked by date and time including which users delete features in a version. In addition, edits can be validated using topology rules and attribute rules.
- The parcel fabric is a record-driven system. The parcel fabric organizes parcel data based on the form in which it was originally recorded

Objectives/Measure of Success
- Eau Claire County's Parcel Fabric is converted and maintained in ArcGIS Pro

Project Timeframes
- 2021-2022

Responsible Parties
- GIS and RPL staff

Estimated Budget Information
- See table at the end of this chapter.

Project #12: Next Gen 911 GIS Data Cleaning and Formatting

Project Description/Goal
- Prepare GIS data to meet the needs of NG 911
- **Land Info Spending Category**: Data Development

Business Drivers
- GIS data has become mission critical and is used to protect life and safety.
- Create accurate spatial data to correctly validate addresses and route 911 calls to the correct PSAP

Objectives/Measure of Success
- NG911 implementation with Eau Claire County

Project Timeframes
- 2021-2024

Responsible Parties
- Eau Claire Emergency Communications Center
- Eau Claire County and City GIS

Estimated Budget Information
- Unknown.

Project #13: Parcel File Scanning

Project Description/Goal
- Transform paper parcel records into text-searchable digital images, linking parcel records to tax parcel database and GIS data.
- **Land Info Spending Category:** Data Development

Business Drivers
- Enable digital searching of parcel files
- Create a digital record with disaster recovery solution
- Reclaim valuable office space

Objectives/Measure of Success
- Parcel files scanned and linked to parcel geometry

Project Timeframes
- 2022-2024

Responsible Parties
- Planning and Development Department

Estimated Budget Information
- Unknown

Project #14: Enterprise Upgrade

Project Description/Goal
- Installation and configuration of Esri ArcGIS Enterprise 10.9.x
- **Land Info Spending Category**: System Maintenance

Business Drivers
- Remain on current supported version with enhanced tools and security
- Lates version enables Parcel Fabric editing in ArcGIS Pro

Objectives/Measure of Success
- Successfully configured and installed ArcGIS Enterprise

Project Timeframes
- 2021-2022

Responsible Parties
- Planning and Development Department

Estimated Budget Information
- Unknown

Completed Projects

- Eau Claire County in collaboration with the City of Altoona and City of Eau Claire participated in WROC 2020 Flights. We acquired 3DEP Lidar with a classified LAS point cloud, hydro breaklines, and a bare earth DEM.
- Acquired 6 inch countywide orthophotography and 3 inch in the urban areas in WROC 2020.
- In 2018 Eau Claire County implemented our ESRI Enterprise System. Enterprise allows us to tailor how our users experience and interact with GIS data. Building GIS capacity, allowing non-GIS experts to preform GIS tasks for themselves. This server-based GIS allows us to publish interactive map services to the web. These services can be public facing web maps, security protected web maps, field data collection apps, or services consumed by custom applications.
- Developed a new GIS Hub site for county users that offers new search options and will contain the GIS options in one searchable location.
- Created a new COVID-19 hub site to support the Health Department with pandemic response.
- Onboarded new Land Records System (Transcendent Technologies Ascent Land Records Suite) and shifted all Property Listing activities to the new system.
- Developed a new parcel-based zoning GIS data schema to accurately feed the Ascent system zoning information.
- All monument visits, tiesheet and section breakdown drafting for Town 25 North, Range 7 West was completed. This includes migration of those PLSS records to the web.
- All monument visits and tiesheet drafting for Town 25 North, Range 6 West was completed. This includes migration of those PLSS records to the web.

Estimated Budget Information (All Projects)

Estimated Budget Information				
Project Title	**Item**	**Unit Cost/Cost**	**Land Info Plan Citations** Page # or section ref.	**Project Total**
1) Benchmark 4, Remonumentation	County Surveyor's Office Internal staff		Page 26	**50,000**
2) Countywide Aerial Imagery	Aerial Image Collection		Page 27	**55,000**
3) Countywide LiDAR	LiDAR Collection		Page 28	**75,000**
4) Highway Right-of-Way Scan	Scanning Project		Page 28	**5,000**
5) Development of Water-Well GIS Layer	GIS Specialist & Health Department Staff		Page 29	**10,000**
6) Development of POWTS GIS Layer	GIS Specialist & Health Department Staff		Page 29	**10,000**
7) ROD Back Scanning	ROD-Back-scan land records		Page 30	**15,000**
8) PLSS Maintenance	County Surveyor's Office & Contracted Services		Page 30	**15,000**
9) UAS and software	Equipment and software		Page 31	**25,000**
10) Floodplain Update	Contract Services		Page 31	**200,000**
11) Pro-Parcel Fabric Conversion	Contract Services		Page 32	**18,000**
12) NG911 GIS Data Cleaning and Formatting	Contract Services		Page 33	**NA**
13) Parcel File Scanning	Contract Services		Page 33	**NA**
14) Enterprise Upgrade	Contract Services		Page 33	**NA**
			GRAND TOTAL	**478,000**

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

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