

Portage County Land Information Plan 2019-2021

**Wisconsin Land Information Program
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EXECUTIVE SUMMARY

About this Document. This document is a land information plan for Portage County prepared by the land information officer (LIO) and the Portage 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 Registers-of-Deeds at the county level. In 2018, Portage County was awarded \$59,888 in WLIP grants and retained a total of \$84,624 in local Register of Deeds document recording fees for land information.

Land Information in Portage 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 Portage 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. The Portage County land information program will work to support land management decisions by improving efficiencies in spatial data management, providing data and analytical support to the comprehensive planning process, broadening the utilization of GIS, and improving online public access to land records.

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

Portage County Land Information Projects: 2019-2021	
Project #1	Digital Orthophotography
Project #2	Develop thematic online mapping services
Project #3	Document imaging improvements
Project #4	Index documents by geography
Project #5	GPS equipment update
Project #6	Floodplain map improvement
Project #7	Ongoing technology expenditures

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

County Land Information System History and Context

Portage County began modernizing land records 30 years ago. County leadership and staff recognized early on that computerization and GIS would improve access, administrative efficiency and accuracy for land records. Below is a list of notable land records activities:

- 1988: GIS pilot study digitizing parcels and integrating assessment/tax data
- 1989: Wisconsin Land Information Program established
- 1990: County Board Resolution creating Portage County Land Records Committee
- 1994: First full-time GIS staff position created
- 1995: Countywide PLSS remonumentation project using traditional survey methods
- 1996: Parcel mapping using coordinate geometry methods and integrating surveyed PLSS monuments **begins**; minor civil divisions layer completed
- 1997: Second full-time GIS staff position hired; Road Centerline layer completed
- 1998: Zoning, Floodplain, Land Use layers completed
- 2000: First county digital orthophotography project completed; hydrography layer completed
- 2001: Parcel mapping using coordinate geometry methods and integrating surveyed PLSS monuments **completed**
- 2002: State mandated comprehensive planning program established
- 2004: First web mapping application published, Address points layer completed
- 2005: Participated in Wisconsin Regional Orthophotography Consortium (WROC)
- 2010: Participated in Wisconsin Regional Orthophotography Consortium (WROC)
- 2011: Migrated to adobe flash based web mapping site
- 2015: Participated in Wisconsin Regional Orthophotography Consortium (WROC), first statewide parcel data initiative submission
- 2016: LiDAR data acquired through 3DEP program administered by DOA, migrated web map to arcgis.com
- 2018: Assessment and Tax systems migrated from as/400 to web based system from Transcendent Technologies

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 Portage County Land Information Council, and others as listed below.

Portage County Land Information Council and Plan Workgroup				
Name	Title	Affiliation	Email	Phone
+Chris Doubek	County Board Supervisor	Portage County Board	doubekc@co.portage.wi.us	715-341-6119
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+Barry Jacowski	County Board Supervisor	Portage County Board		715-366-8500
+Steve Lane	Realtor	First Weber	lanes@firstweber.com	
+Dale Okray	Captain	Portage County Sheriff's Office	OkrayD@co.portage.wi.us	715-346-1400
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+Keith Rice	Professor of Geography	UW-Stevens Point	krice@uwsp.edu	715-346-4454
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+Brenda Voelker	GIS Manager / Cemetery Coordinator	Village of Plover	bvoelker@ploverwi.gov	715-345-5250
+Cindy Wisinski	Register of Deeds	Portage County	wisinskc@co.portage.wi.us	715-346-1428

+ Land Information Council Members designated by the plus symbol

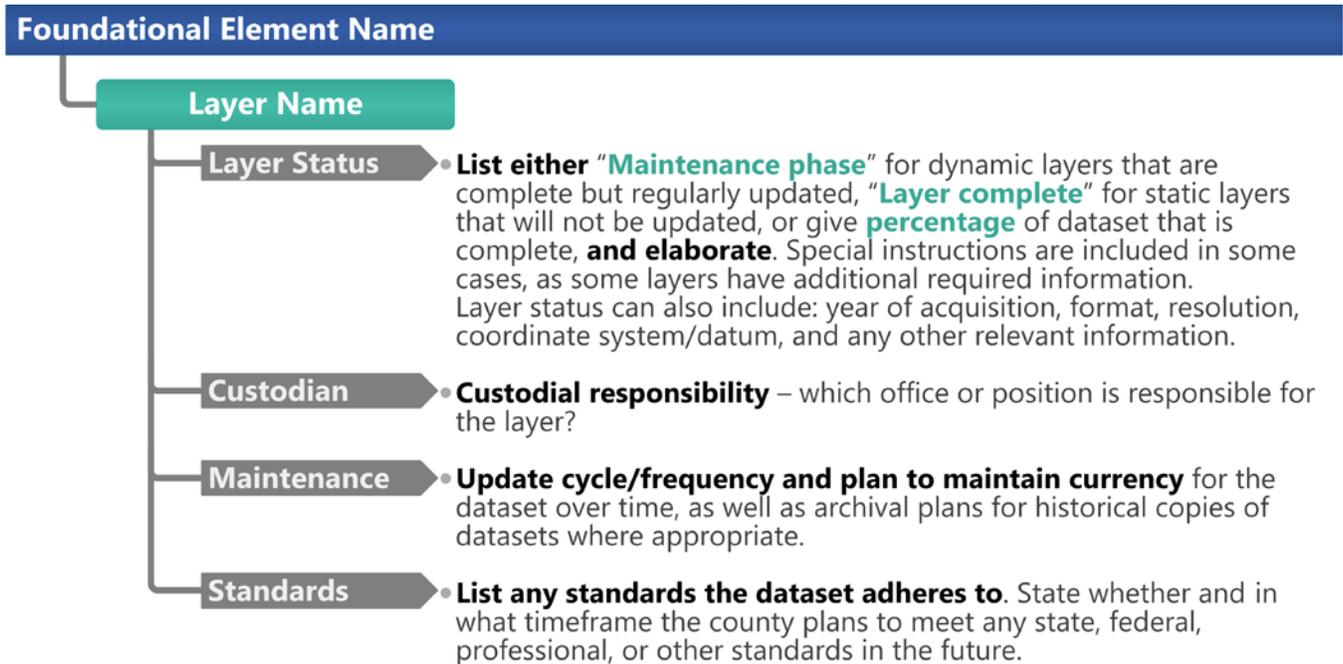
2 FOUNDATIONAL ELEMENTS

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

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

FOUNDATIONAL ELEMENTS

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



PLSS

Public Land Survey System Monuments

Layer Status

PLSS Layer Status

	Status/Comments
Number of PLSS corners (selection, ¼, meander) set in original government survey that can be remonumented in your county	● 2594
Number and percent of PLSS corners capable of being remonumented in your county that have been remonumented	● 2594 (100%)
Number and percent 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 	● 1164 (45%)
Number and percent of survey grade PLSS corners integrated into county digital parcel layer	● 1072 (41%) Integrated defined as 3 feet or less from a parcel line
Number and percent of non-survey grade PLSS corners integrated into county digital parcel layer	● 1379 (53%)
Tie sheets available online?	<ul style="list-style-type: none"> ● Yes https://portagecowi.maps.arcgis.com/apps/webappviewer/index.html?id=529724c8fe804b8887ce108dcb71bb4d
Percentage of remonumented PLSS corners that have tie sheets available online (whether or not they have corresponding coordinate values)	● 100%
Percentage of remonumented PLSS corners that have tie sheets available online (whether or not they have corresponding coordinate values) and a corresponding URL path/hyperlink value in the PLSS geodatabase	● 100%
PLSS corners believed to be remonumented based on filed tie-sheets or surveys, but do not have coordinate values	● 0%
Approximate number of PLSS corners believed to be lost or obliterated	● 0
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)?	● Wisconsin Corner Point Identification 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	● 245
Number and percent of PLSS corners remonumented along each county boundary	● 245 (100%)
Number and percent of remonumented PLSS corners along each county boundary with survey grade coordinates	● 105
In what ways does your county collaborate with or plan to collaborate with neighboring counties for PLSS updates on shared county borders?	● Exchange of tie sheets

Custodian

- Custodial responsibilities for PLSS corners are shared among the County Surveyor, Register of Deeds, and GIS Coordinator. The County Surveyor administers the remonumentation and GPS program. The Register of Deeds does the record keeping and the GIS Coordinator updates the GIS with new records and publishes tie sheets and coordinates online.

Maintenance

- There is a remonumentation program in place that is administered by the County Surveyor. Each year the remonumentation program hires a surveyor to deliver coordinates that meet the 2 centimeter accuracy classification, new tie sheets, and new monuments. The program collected 238 coordinates in 2017 and will collect approximately that many again in 2018. Portage County also plans to seek a Strategic Initiative grant in 2019 to accelerate the remonumentation program.

Standards

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

Other Geodetic Control and Control Networks

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

Layer Status

- Maintenance Phase.
- There are currently 56 geodetic control network monuments in Portage County. Monuments were developed using Federal Geodetic Control Committee (FGCC), 1984 standards for First and Second order monuments. A coordinate listing and tie sheets are available online at <http://www.arcgis.com/apps/webappviewer/index.html?id=529724c8fe804b8887ce108dcb71bb4d>

Custodian

- Like the PLSS monuments, custodial responsibilities for Geodetic control are shared among the County Surveyor, Register of Deeds, and GIS Coordinator. The County Surveyor administers the remonumentation and GPS program. The Register of Deeds does the record keeping and the GIS Coordinator updates the GIS with new records and publishes tie sheets and coordinates online.

Maintenance

- Portage County Geodetic control monuments are included in the County remonumentation program. Work being done on PLSS section corners includes geodetic control monuments to improve accuracy and assure regular visits to the geodetic control monuments. Surveyors using geodetic and PLSS coordinates developed by GPS report that errors are less than 1.5 centimeters.

Standards

- United States, Federal Geodetic Control Committee, Standards and specifications for geodetic control networks 1984.
- Geospatial Positioning Accuracy Standards Part 2: Standards for Geodetic Networks (FGDC-STD-007.2-1998)

Parcel Mapping

Parcel Geometries

Layer Status

- **Progress toward completion/maintenance phase:** In Portage County, 100% of the county's parcels are available in a commonly-used digital GIS format.

- **Projection and coordinate system:** Data are stored in the Portage County Wisconsin Coordinate Reference System which is in a Lambert Conformal Conic projection based on the NAD 1983(91) horizontal geodetic datum.
- **Integration of tax data with parcel polygons:** The County does have a parcel polygon model that directly integrates tax/assessment data as parcel attributes.
- **Esri Parcel Fabric/LGIM Data Model:** The County does use the Esri Parcel Fabric Data Model, and Esri's Local Government Information Model. Conversion to the Local Government Information Model is ongoing. Major elements such as parcels, addresses, road centerlines are already converted. This conversion project is being undertaken to align County data with some sort of industry standard.
- **Online Parcel Viewer Software/App and Vendor name:** Portage County uses the Esri Web AppBuilder for ArcGIS to build and maintain a custom parcel viewer designed in-house.
- **Unique URL path for each parcel record:** Yes, the County has a unique URL path for each parcel record that is stable and can be exported. Information accessible from the URL includes detailed assessment data, 10 years of tax data, and document images. In 2019 permits for zoning and on-site waste will be available.
[http://landinfo.co.portage.wi.us/LandRecords/PropertyListing/RealEstateTaxParcel/DetailFromParcelNumber?parcelNumber=\[parcel number\]](http://landinfo.co.portage.wi.us/LandRecords/PropertyListing/RealEstateTaxParcel/DetailFromParcelNumber?parcelNumber=[parcel number])

Custodian

- The Register of Deeds and GIS Specialist share custodial duties for parcel geometry

Maintenance

- **Update Frequency/Cycle.** Parcel polygons are updated continuously. The parcel geometry update process begins with input using coordinate geometry methods (COGO) by the Register of deeds or GIS Specialist. The GIS Specialist performs quality assurance. Portage County will continue the continuous maintenance into the future. Portage County has archived parcels and assessment data since 2001 when the parcel map was first completed.

Standards

- **Data Dictionary:** A data dictionary for all attributes is stored with the data. The data dictionary is human-readable and can be stored independently of the data. There are definitions/explanations of county-specific notations. County parcel data fall in between the WLIA standard for index and cadastral maps. The County does not intend that our parcel maps replace certified survey maps or used as the sole basis for guaranteeing title. Portage County does not plan to meet any standards other than the WLIA index map standard.

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:** NA

Custodian

- Staff in the Register of Deeds/Land Description Department are custodians of the assessment roll.

Maintenance

- **Maintenance of the Searchable Format standard:** To maintain the Searchable Format standard, the county will keep its parcel polygons, assessment roll and tax roll up-to-date. All of the required data are in the assessment and tax rolls.
- **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. Portage County implemented the Ascent Land Records Suite while this plan was being written. The searchable format workflow will be different and conversion scripting will need to be re-done.

Standards

- Wisconsin Department of Revenue Property Assessment Manual and attendant DOR standards
- DOR XML format standard requested by DOR for assessment/tax roll data
- s. 59.72(2)(a), Wis. Stats. Presence of all nine "Act 20" attributes

Non-Assessment/Tax Information Tied to Parcels

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

Zoning Permit Layer

Layer Status

- Maintenance phase.
- Zoning permits are scanned and filed by Parcel Identification Number (PIN) making them accessible through a digital map. Portage County plans to make a web application available to the public that makes zoning documents available through a parcel map during the three year period covered by this plan.

Custodian

- The custodians of zoning permits are the Zoning Coordinators in the Planning and Zoning Department.

Maintenance

- Zoning documents are scanned and indexed in permanent storage as part of the business process of the zoning program. The images are stored in IMS/21 and managed through an IBM DB2 application.

Standards

- Chapter 7, Portage County Code of Ordinances.

Private on-site wastewater treatment system (POWTS) permits data

Layer Status

- Maintenance phase.
- POWTS are scanned and filed by PIN making them easy to access through a digital map. Portage County plans to make a public web application showing POWTS permit and plumbing information available during the time period covered by this plan.

Custodian

- The custodians of zoning permits are the Zoning Coordinators in the Planning and Zoning Department.

Maintenance

- POWTS information maintenance is managed through the POWTS Tracking System from Transcendent Technologies LLC. Private wastewater management is important to maintaining environmental quality so the Planning and Zoning Department will continue to commit staff resources to this effort into the future.

Standards

- Chapter 7, Portage County Code of Ordinances.

Well Construction Information

Layer Status

- Maintenance phase.
- Portage County has georeferenced construction information for approximately 21,000 wells.

Custodian

- The Water Quality Specialist in the Planning and Zoning Department is the custodian of county well construction information.

Maintenance

- Portage County updates well construction records from the Wisconsin Department of Natural Resources annually.

Standards

- NA

ROD Real Estate Document Indexing and Imaging

Layer Status

- **Grantor/Grantee Index:** **Maintenance Phase.** In Portage County, the Grantor/Grantee index includes documents filed since 1856. The index is computer searchable to 1962. There is an ongoing contract with Fidlar Technologies to extend the grantor/grantee index beyond 1962.
- **Tract Index:** The tract index began in 2001 for all real estate related documents and is based on the Public Land Survey System.
- **Imaging:** Documents are managed using a combination of Fidlar Technologies software and the IMS/21 document imaging system. All real estate related documents, dating to 1841, are scanned and searchable by document number. Access to documents is available through a public website <https://tapestry.fidlar.com/Tapestry2/Search.aspx>.
- **ROD Software/App and Vendor Name:** Laredo/Tapestry. \$6.95 per search, \$1.00 per page to print.

Custodian

- County Register of Deeds

Maintenance

- The core activity of the Register of Deeds office is to maintain and archive documents in perpetuity. Toward this end, Portage County uses software from Fidlar Technologies and IMS/21 to provide secure, stable and permanent access real estate records. As stated above there is an ongoing program to extend the grantor/grantee digital index to documents filed since 1841. The grantor/grantee index currently includes documents filed since 1962.

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:** QL2
- **Post spacing:** 0.7 meters
- **Contractor's standard, etc.:** U.S. Geological Survey, National Geospatial Program, LiDAR Base Specification, Version 1.2.

Custodian

- The Planning and Zoning Department is custodian of the LiDAR data.

Maintenance

- The slow rate of change for elevation data along with the high cost of collection push the update cycle beyond the scope of this 3 year plan. Portage County plans incremental updates in areas of significant change, such as new highway corridors, large building developments, or open-pit mining expansions.

Standards

- United States Geological Survey, National Geospatial Program, LiDAR Base Specification, version 1.2, November 2014, Quality Level 2 (QL2).

LiDAR Derivatives

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

Layer Status

- **Maintenance phase.**
- Portage County has 1 foot contours and a DEM with 2 foot pixels derived from the 2016 LiDAR project.

Custodian

- The Planning and Zoning Department is custodian of LiDAR derived products.

Maintenance

- Maintenance of derived products will follow collection of new LiDAR data in areas of significant change.

Standards

- United States Geological Survey, National Geospatial Program, LiDAR Base Specification, version 1.2, November 2014, Deliverables.

Other Types of Elevation Data

Layer Status

- **Layer Complete.**
- Portage County has a digital terrain model (DTM) built for orthorectifying aerial photos for elevation data.
- **Layer Complete.** A 10' contour interval file derived from 10 meter National Elevation Data (NED) is also available. Both data files are from 2000 or earlier making them significantly out-of-date.

Custodian

- The Planning and Zoning Department is the custodian of elevation data.

Maintenance

- The ortho-DTM and 10' contours were replaced by LiDAR derived data in 2016.

Standards

- The Ortho-DTM and 10' contours from the NED are both constructed in-house and have not been tested for compliance with accuracy standards.

Orthoimagery

Orthoimagery

Layer Status

- **Most recent acquisition year:** 2015
- **Resolution:** 6 inch ground pixel
- **Contractor's standard:** Aerial imagery was collected to support 0.5 foot ground sample distance (GSD) orthoimagery to meet ASPRS Class II horizontal accuracy specifications at 1" = 100' map scale. The horizontal accuracy meets or exceeds 2.0 feet RMSE using the National Standards for Spatial Data Accuracy (NSSDA) standards.
- **Next planned acquisition year:** 2020
- **WROC participation in 2020:** Confirmed participating in WROC 2020

Custodian

- The Planning and Zoning Department is the custodian of 2015 orthoimagery.

Maintenance

- Orthoimagery is currently on a five (5) year update cycle.

Standards

- The horizontal accuracy meets or exceeds 2.0 feet RMSE using the National Standards for Spatial Data Accuracy (NSSDA) standards.
- ASPRS Class II horizontal accuracy specifications at 1" = 100' map scale.

Historic Orthoimagery

Layer Status

- [Layer Complete](#).
- Complete county-wide Digital Orthoimagery is available for the years 1992, 2000, 2005, 2010.

Custodian

- The Planning and Zoning Department is the custodian for historic orthoimagery.

Maintenance

- Historic orthoimagery is hosted on a central server and archived by Druva Phoenix cloud services.

Standards

- The digital orthoimagery from 2000, 2005, and 2010 meets or exceeds National Map Accuracy Standards for 1"=200' scale mapping. The 1992 orthoimagery meets or exceeds National Map Accuracy Standards for 1"=1000' scale mapping. This standard requires that 90% of all test points are within 1/30th of an inch of actual location at mapping scale.

Other Types of Imagery

[e.g., Oblique Imagery, Satellite Imagery, Infra-red, etc.](#)

Layer Status

- [Layers complete](#).
- Portage County holds 9" x 9" contact prints of aerial imagery from 1948, 1960, 1968, 1978, and 1990.
- All are available for public view. Only the images from 1990 are good enough quality to be orthorectified. The rest are United States Department of Agriculture (USDA) crop compliance photos with limited data on camera specifications needed for orthorectification.

Custodian

- The Planning and Zoning Department is custodian for historic orthoimagery.

Maintenance

- Portage County will pursue scanning with simple registration and rectification for historic contact prints. Scanning will prevent further image deterioration and improve accessibility.

Standards

- Simple registration/rectification does not meet any positional accuracy standards.

Address Points and Street Centerlines

Address Point Data

Layer Status

- [Maintenance Phase](#).
- Address points are mapped at the location of the building to which they are assigned.

Custodian

- The Planning and Zoning Department is custodian for address points.

Maintenance

- New addresses are mapped as they are reported by Town Clerks and emergency communications staff. Geolocating from address points is a key part of emergency service delivery, so maintaining data currency is a top priority.

Standards

- NA

Building Footprints

Layer Status

- Portage County does not have a building footprints layer.

Other Types of Address Information

e.g., Address Ranges

Layer Status

- Portage County does not have address ranges. This will be addressed in preparation for NG911.

Street Centerlines

Layer Status

- [Maintenance Phase](#).

Custodian

- The Planning and Zoning Department is custodian for street centerlines.

Maintenance

- Street centerline data are added or updated as needed. With address points, centerline data are the backbone of emergency service delivery and will be a priority for maintenance efforts by GIS staff. An effort is made to follow the center of the travelled way with centerline linework. Deviations are corrected as they are reported or noticed by GIS staff.

Standards

- NA

Rights of Way

Layer Status

- [Maintenance Phase](#).
- This data file also includes public access easements. Road right-of-way is assumed to be 66 feet wide in the absence of information stating otherwise.

Custodian

- The Planning and Zoning and Register of Deeds/Land Description Departments are custodians for rights-of-way.

Maintenance

- Road right-of-way and public access easements are developed as part of parcel mapping which is updated continuously. The annual parcel archive does not include road right-of-way.

Standards

- NA

Trails

e.g., Recreational Trails

Layer Status

- [Maintenance Phase](#).

- Trails layers in the Portage County consist of the Green Circle, Tomorrow River State, and Standing Rocks Park trail systems for hiking, biking and cross country skiing. All of these trail systems are completely mapped using a resource grade GPS. Additionally, snowmobile trails are mapped using aerial photograph interpretation, snowmobiler reports and GPS.

Custodian

- The Planning and Zoning Department is custodian of trails data.

Maintenance

- GIS staff update trails as new or corrective information is provided by trail users or County Parks department staff.

Standards

- NA

Land Use

Current Land Use

Layer Status

- [Maintenance phase.](#)
- Current land use is prepared from aerial photography and field work as part of comprehensive plan preparation and updates. As a result, current land use reflects conditions from multiple years and land use categories vary depending upon the municipality.

Custodian

- The Planning and Zoning Department is custodian of current land use.

Maintenance

- Current land use is updated by municipality as part of comprehensive plan updates. Usually this is a 10 year cycle. One land use class, irrigated cropland, is kept current by using the most recent USDA or Portage County aerial photographs.

Standards

- Portage County comprehensive plan existing land use categories, 2006.

Future Land Use

Layer Status

- [Maintenance phase.](#)
- Future land use is prepared as part of comprehensive planning for each municipality.

Custodian

- The Planning and Zoning Department is custodian of future land use.

Maintenance

- Future land use is an integral part of the Portage County zoning program. Changes to future land use require an act of the municipal governing body and the County Board of Supervisors. GIS staff monitor future land use change activity and update the layer as required and will continue to do so into the future.

Standards

- s. 66.1001, Wis. Stats. Comprehensive planning.
- Portage County comprehensive plan future land use categories, 2006.

Zoning

County General Zoning

Layer Status

- The County does maintain a GIS representation of county general zoning boundaries.
- [Maintenance phase](#).

Custodian

- The Planning and Zoning Department is custodian of general county zoning.

Maintenance

- General zoning is an integral part of the Portage County land use management program. Changes to zoning are advanced through the municipal governing body and the County Board of Supervisors. GIS staff monitor zoning change activity and update the layer as changes are made.

Standards

- Portage County Code of Ordinances, Chapter 7.

Shoreland Zoning

Layer Status

- The County does maintain a GIS representation of county shoreland zoning boundaries.
- [Layer complete](#).
- Portage County maps shoreland zones county-wide as buffers of the hydrography layer to identify where State and County shoreland regulations apply.

Custodian

- The Planning and Zoning Department is custodian of the shoreland zoning buffer data.

Maintenance

- Changes to the shoreland zone are very irregular and follow changes to the hydrography layer or new navigability assessments from the Wisconsin Department of Natural Resources.

Standards

- Wisconsin Administrative Rules: NR115.
- Portage County Code of Ordinances, Chapter 7.

Farmland Preservation Zoning

Layer Status

- Not administered by Portage County.
- **Year of certification:** 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](#).
- Letters of Maps Change are included if the boundaries are adjusted in the FEMA map. Letters of map change that are not reflected in the FEMA are still used in ordinance administration. They are mapped as points and hyperlinked to the document that describes the change.

Custodian

- Federal Emergency Management Agency (FEMA) is custodian of the floodplain layer.

Maintenance

- Portage County GIS staff monitor the FEMA website and download new data as it becomes available. The most recent update is from May, 2015.

Standards

- NA

Airport Protection

Layer Status

- The County does maintain a GIS representation of airport protection zoning boundaries.
- [Layer complete](#).
- **Airport protection zoning map depicts:** Height limitation restrictions. Structure height limits are depicted in a polygon layer surrounding the Stevens Point municipal airport.

Custodian

- Portage County Planning and Zoning is the custodian of the airport protection zoning layer.

Maintenance

- This layer is updated as changes are made.

Standards

- Portage County Code of Ordinances, Chapter 7.

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

- [Maintenance phase](#).
- Zoning districts in the Villages of Whiting, Rosholt, Amherst, and the Town of Grant are completely mapped.

Custodian

- The Portage County Planning and Zoning Department is custodian of the stated municipal zoning data.

Maintenance

- The Town of Grant is the only municipality that supplies routine updates for zoning changes. The other municipalities listed rarely make zoning changes.

Standards

- NA

Administrative Boundaries

Civil Division Boundaries

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

Layer Status

- [Maintenance phase.](#)
- Civil division boundaries are complete across Portage County. Boundaries are reconciled with parcel lines.

Custodian

- The Planning and Zoning Department is custodian of civil division boundaries.

Maintenance

- Planning and Zoning GIS staff update the civil division layer as annexations occur. Portage County will comply with the State statute requiring semi-annual submission of civil boundaries. An annual archive of civil boundaries began in 2015.

Standards

- Civil division attributes follow requirements set by the Legislative Technology Services Bureau.

School Districts

Layer Status

- [Maintenance phase.](#)
- A polygon layer originally derived from parcels is updated periodically to match the assessment roll.
- Relation to parcels: School districts are tied to parcels by an attribute in the assessment roll.
 - Attributes linked to parcels: PCLSCD

Custodian

- The Planning and Zoning Department is custodian of school district data.

Maintenance

- School districts are a derivative product of the parcel layer and assessment roll, so maintenance will follow along with the parcels. Since parcels are archived annually from 2001, past school districts are available for the same period.

Standards

- NA

Election Boundaries

[e.g., Voting Districts, Precincts, Wards, Polling Places, etc.](#)

Layer Status

- [Maintenance phase.](#)
- Election boundaries are mapped at the ward level with attributes for aldermanic, supervisory, and legislative districts.

Custodian

- The Planning and Zoning Department is custodian of the election boundary layer.

Maintenance

- Planning and Zoning GIS staff update the election boundary layer as changes occur. Portage County will comply with the State statute requiring semi-annual submission of election boundaries to the Legislative Technology Services Bureau.

Standards

- Election boundary attributes follow requirements set by the Legislative Technology Services Bureau.

Utility Districts

[e.g., Water, Sanitary, Electric, etc.](#)

Layer Status

- [Maintenance phase.](#)
- The only utility district data managed by Portage County is the Stevens Point Urban Area Sewer Service Boundary. The layer defines a twenty year sewer service area which is used in the area-wide water quality management plan.

Custodian

- The Planning and Zoning Department is custodian of the Stevens Point Urban Area Sewer Service Boundary layer.

Maintenance

- The Stevens Point Area-wide water quality management plan is updated approximately every 10 years, most recently in 2008.

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

- [Maintenance phase.](#)
- Emergency services district are mapped by number county-wide. Each emergency service district has attributes describing law enforcement, fire, first responder, ambulance, and rescue services.

Custodian

- The Planning and Zoning Department is custodian of emergency service districts.

Maintenance

- Emergency service districts are updated by GIS staff as changes occur. Since this data file is critical to emergency services dispatch, maintenance is given high priority.

Standards

- NA

Lake Districts

Layer Status

- Portage County does not have a lake district layer

Native American Lands

Layer Status

- Portage County does not have a Native American lands layer

Other Administrative Districts

[e.g., County Forest Land, Parks/Open Space, etc.](#)

Layer Status

- [Maintenance phase.](#)
- **Public lands** are derived from the parcel layer and stored independently.

Custodian

- The Planning and Zoning Department is custodian of the public lands layer.

Maintenance

- Planning and Zoning GIS staff update the public lands layer with a query of the parcel layer semi-annually.

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

- [Maintenance phase](#).
- The hydrographic layer in Portage County is extracted from breaklines in the digital terrain model used to orthorectify the 2000 aerial photographs.

Custodian

- The Planning and Zoning Department is custodian of the hydrography layer.

Maintenance

- The hydrography is updated for additions and deletions of ponds and ditches as new photography becomes available. There has not been a comprehensive update since 2000.

Standards

- NA

Cell Phone Towers

Layer Status

- [Maintenance phase](#).
- Cell towers are mapped county-wide, as are all other communications towers. Locations are determined through a combination of photographic evidence, zoning permits and Federal Communications Commission data.

Custodian

- The Planning and Zoning Department is custodian of the communications tower layer.

Maintenance

- Communications towers are regulated under the Portage County Zoning Ordinance so GIS staff are able to add new towers as permit applications are submitted.

Standards

- NA

Bridges and Culverts

Layer Status

- [Maintenance phase](#) for bridges.
- Portage County does not have a culvert layer. Bridgesfeet are mapped from highway department records.

Custodian

- Portage County Planning and Zoning Department is custodian of the bridge layer.

Maintenance

- Maintenance is performed intermittently as required by new construction, or replacement.

Standards

- NA

Pipelines

Layer Status

- [Maintenance phase](#).

- The pipeline layer is a copy of data from the National Pipeline Mapping System.

Custodian

- US DOT Pipeline and Hazardous Materials Safety Administration.

Maintenance

- Portage County GIS staff review data from the National Pipeline Mapping System annually for updates

Standards

- NA

Railroads

Layer Status

- [Maintenance phase](#).
- Railroads are mapped from orthoimagery.

Custodian

- Portage County Planning and Zoning Department is the custodian of the railroads layer.

Maintenance

- Railroads are updated as new imagery becomes available.

Standards

- NA

3 LAND INFORMATION SYSTEM

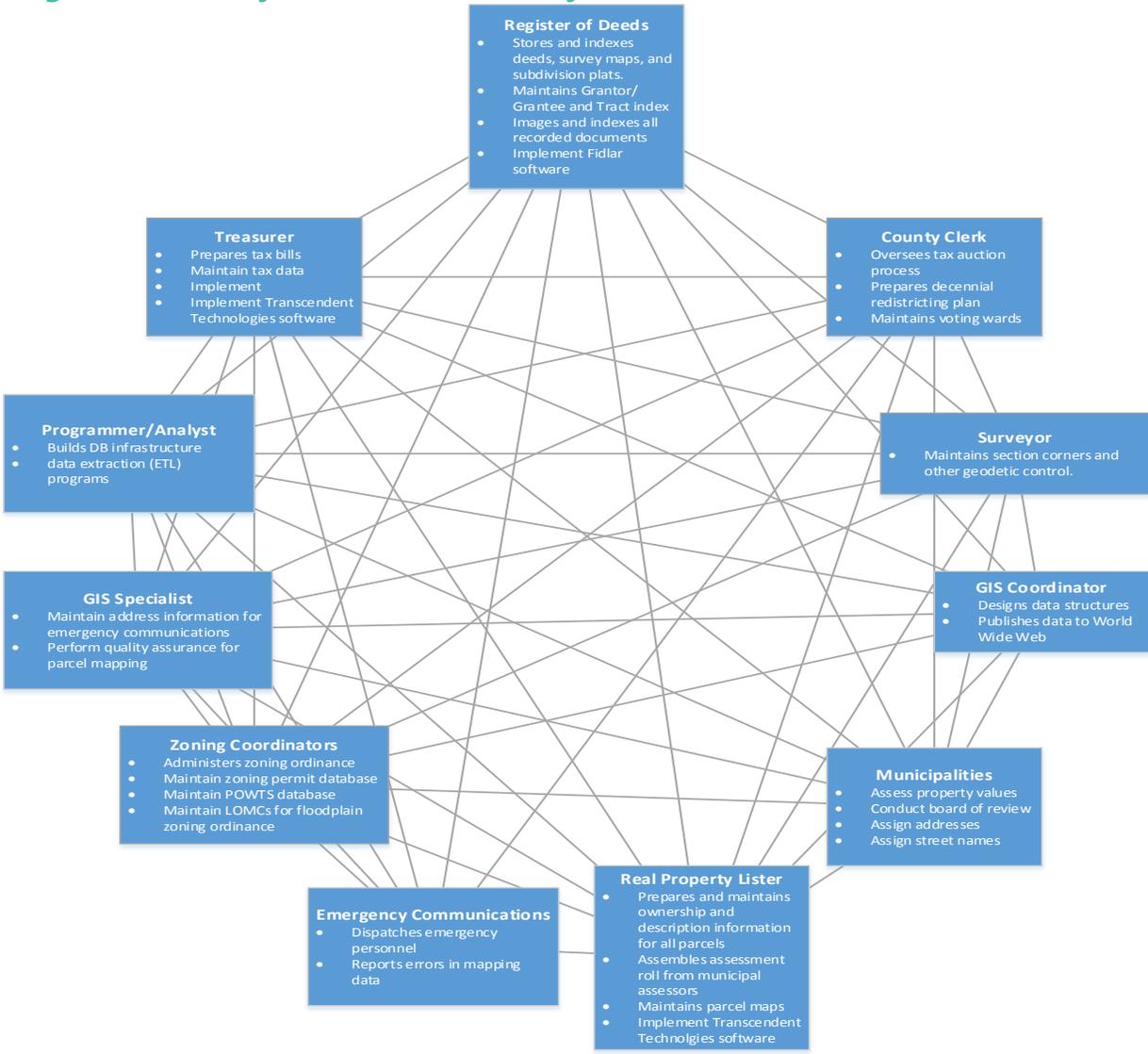
The WLIP seeks to enable land information systems that are both modernized and integrated. Integration entails the coordination of land records to ensure that land information can be shared, distributed, and used within and between government at all levels, the private sector, and citizens.

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

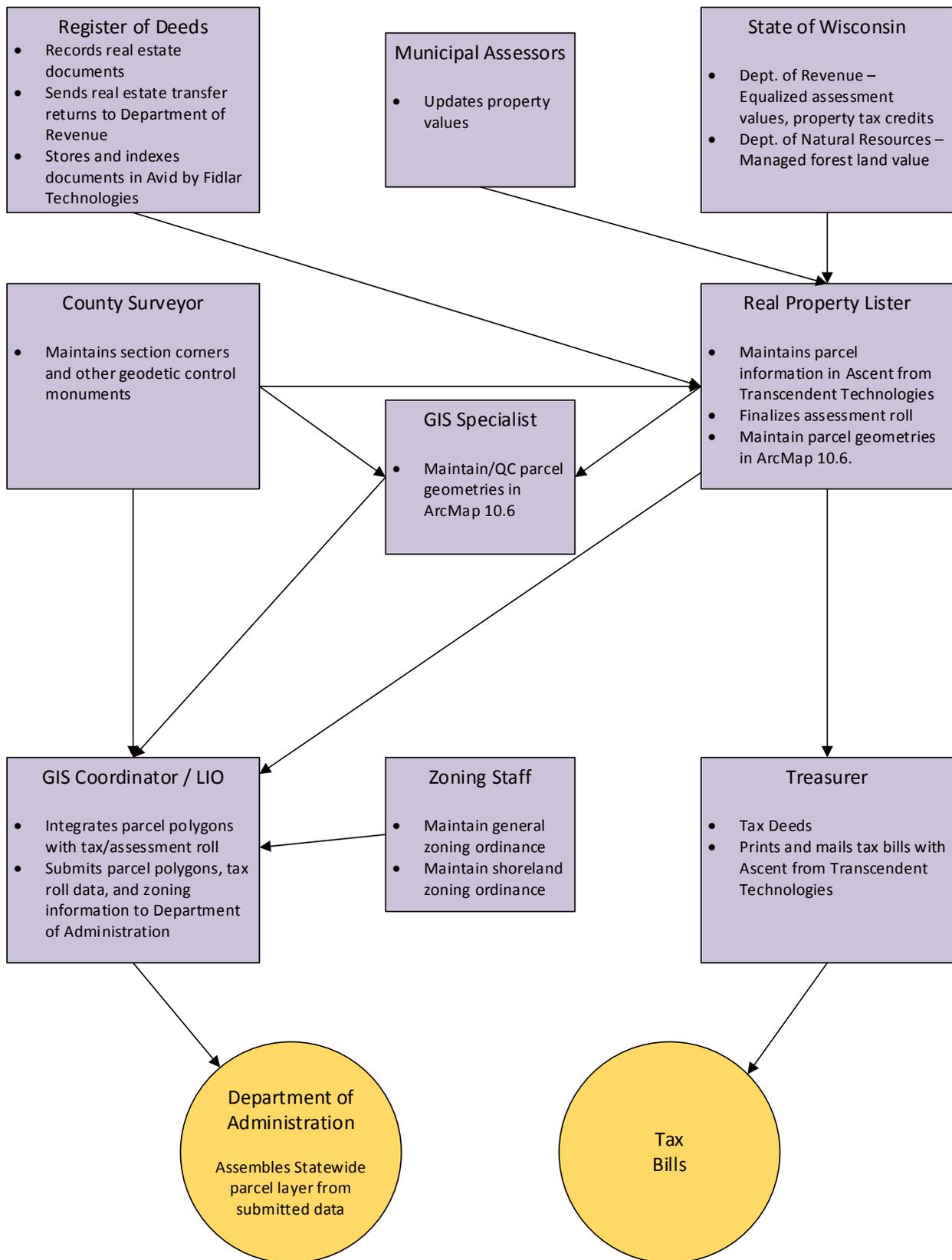
- The design, development, and implementation of a land information system that contains and integrates, at a minimum, property and ownership records with boundary information, including a parcel identifier referenced to the U.S. public land survey; tax and assessment information; soil surveys, if available;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



County Parcel Data Workflow Diagram



Technology Architecture and Database Design

This section refers to the hardware, software, and systems that the county uses to develop and operate computer systems and communication networks for the transmission of land information data.

Hardware

- Web server:
 - Windows Server 2008 R2 Standard
 - 8.00 GB RAM
 - 2 Intel Xeon CU E5-2650 v2 @ 2.60 GHz processors
 - 150 GB storage
- Data server:
 - Windows server 2012
 - 16.00 GB RAM
 - 3 TB storage
- Desktops
 - 14 desktops from assorted vendors ranging in age from 0 to 10 years.
- Network
 - Gigabit Ethernet on Cisco routers and switches.

Software

- Geographic Information Systems. Portage County uses the esri suite of products on the desktop, server and arcgis.com. Data creators and editors use ArcGIS Desktop Advanced. ArcGIS Desktop Basic is used on 11 computers to access map projects and GIS data. The public access web applications are built with esri's web app builder and hosted on arcgis.com. Annual maintenance cost is approximately \$14,000.
- Document imaging. Portage County uses Laredo/Tapestry from Fidar Technologies to manage register of deeds documents. Zoning and on-site waste documents including permits are scanned and managed with IMS/21 software. Road records, highway plats and section corner tie-sheets are stored in an unmanaged file directory structure and hyperlinked by a field in the GIS data.
- Land records and Tax systems. Portage County uses the Ascent suite of products to manage land information including real property listing, assessment and tax.

Website Development/Hosting

- Website development is done in-house using the Web App Builder tool on arcgis.com. Data for web services is hosted on-site while the web applications are hosted on arcgis.com. Land records and tax information is hosted locally and published online through the Ascent Suite of products from Transcendent Technologies.

Metadata and Data Dictionary Practices

Metadata Creation

- **Metadata creation and maintenance process:**
 - At a minimum, spatial data will get a description and use restriction entry. Foundational elements receive a complete citation consistent with the FGDC Content Standard for Digital Geospatial Metadata. Date entries should be updated each time data are published. This will be a point of emphasis going forward.

Metadata Software

- **Metadata software:** ArcCatalog 10.6
 - 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:** Portage County manually populates summary, description, and attribute definitions
 - Overview:

- Item Description: Title, Tags, Summary, Description, Credits, Use limitations.
- Topics and Keywords: Topic Categories, Theme Keyword, Place Keywords, and temporal Keywords.
- Resource Citation: Dates created/published.
- Resource Citation Contacts: Contacts Manager.
- Metadata:
 - Contacts: Contact and Role.
 - Maintenance: Update Frequency.
 - Constraints: General Constraints.
- Resources:
 - Details: Status.
 - Points of Contacts: Contact and Contact Information.
 - Resources Maintenance: Update Frequency.
 - Resource Constraints: General and Legal.
 - Fields: Entity and attribute information details.

Metadata Policy

- **Metadata Policy:** The minimum requirements for metadata are summary, description and attribute list.

Municipal Data Integration Process

- Portage County maintains foundational elements in every municipality. There is no integration necessary for foundational data. Municipal data such as water, wastewater, and storm water is available as an online service or through copies obtained annually or as needed.

Public Access and Website Information

Public Access and Website Information (URLs)

Public Access and Website Information

GIS Webmapping Application(s) Link - URL

<https://portagecowi.maps.arcgis.com/apps/webappviewer/index.html?id=1406812931d14616a1b4577c8c288978>

<https://portagecowi.maps.arcgis.com/apps/webappviewer/index.html?id=529724c8fe804b8887ce108dc b71bb4d>

GIS Download Link - URL

<ftp://gisinfo.co.portage.wi.us/PublicFTP/PortageCounty.zip>

Real Property Lister Link - URL

<http://landinfo.co.portage.wi.us/LandRecords/PropertyListing/RealEstateTaxParcel#/Search>

Register of Deeds Link - URL

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

Municipal Website Information

Municipal Website

City of Stevens Point Tax Parcel Viewer
City of Stevens Point Zoning Viewer

Municipal Website URL

<http://stevenspoint.maps.arcgis.com/apps/webappviewer/index.html?id=e45c2d453d3f44daadd0a3131b131c21>
<http://stevenspoint.maps.arcgis.com/apps/webappviewer/index.html?id=2097fc9e9f024df0b284e3fc66bdb2b6>

Data Sharing

Data Availability to Public

Data Sharing Policy

- Data is available to the public via email and FTP at no charge. Compact Discs and DVDs are available for \$35 and \$100 respectively. Paper maps are available for \$1 per square foot. Labor for custom projects is charged at \$25 per hour.

Open Records Compliance

- Portage County follows the portions applicable to local government in Wisconsin Public Records Law, Wisconsin State Statutes 19.32 through 19.39, for the distribution of land records data.

Data Sharing Restrictions and Government-to-Government Data Sharing

Data Sharing Restrictions

- Portage County does not have any restrictions on distribution, search, or download for data in our spatial catalog.

Government-to-Government Data Sharing

- Portage County spatial data is available free of charge to all levels of government. The standard \$1 per square foot fee is levied on paper maps after \$100 in services (@\$25 per hour) are rendered.

Training and Education

- Portage County will continue to monitor technical assistance email list service for land information program news and education.
- The Portage County budget contains funding for two people to attend the annual Wisconsin Land Information Association meeting and the Esri Wisconsin User's Group meeting. In addition, funding is available for four (4) days of instructor led training per year.

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.

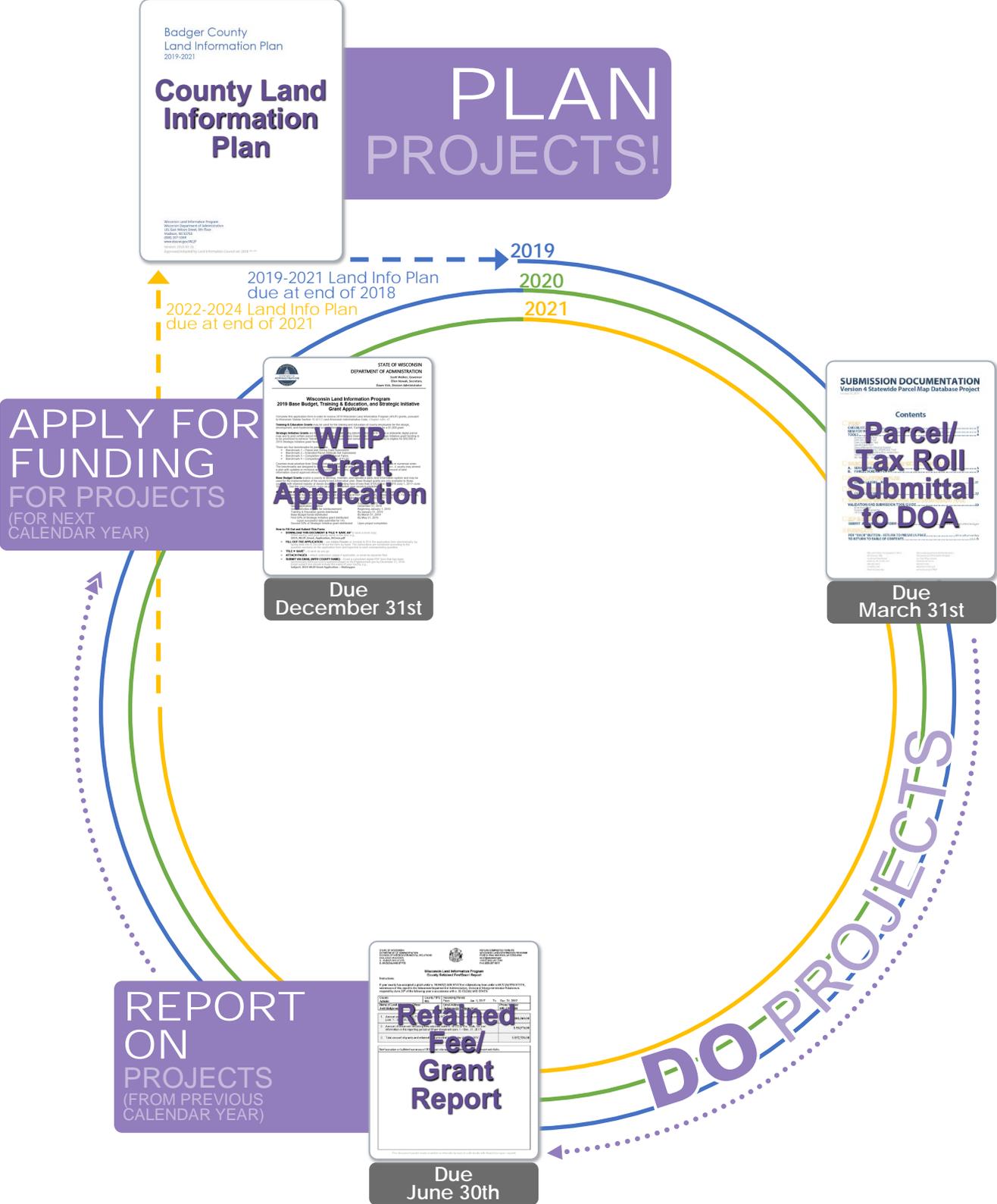


Figure 1. The WLIP Land Information Plan/Grant Project Cycle

Project Plan for PLSS (Benchmark 4)

Project Title: Project Plan for PLSS (Benchmark 4)

Project Description/Goal

Planned Approach

- The remonumentation program administered by the County Surveyor collects survey-grade coordinates on approximately 70 PLSS corners each year. Strategic Initiative grant funds will be used to accelerate this program. The parcel fabric will be edited to use new coordinates where the discrepancy is three (3) feet or more. New surveys tied to remonumented corners will be used to adjust surrounding parcels. In the future, GIS staff will implement maintenance tools that automatically adjust all of the parcel fabric to updated PLSS coordinates.

Current Status

- **Tally of the total number of corners:** 2594
- **Re monumentation status:** See PLSS Layer Status table in Chapter 2.
- **Coordinate status (accuracy class) if known:** 1164 survey-grade. 1397 sub-meter, 33 approximate.

Goals

- **Number of corners to be remonumented and/or rediscovered:** 250 per year
- **Number to have new coordinates established:** 250 per year
- **Accuracy class for these new coordinates:** survey-grade
- **Way in which these points will be integrated into the parcel fabric:** Coordinate geometry is used to input parcel polygons. Surveys begin at PLSS corners. PLSS corners are used to mark the boundaries of sections which are then subdivided into sixteenths. The sixteenths are the starting point for metes and bounds descriptions. Surveys reference PLSS corner locations by bearing and distance.

Missing Corner Notes

- **Documentation for any missing corner data:** NA

County Boundary Collaboration

- Portage County will publish tie sheets in a public web utility. Also, Portage will exchange tiesheets for remonumented corners with the appropriate neighboring counties.

Business Drivers

- The Project Plan for PLSS is a requirement for those counties who utilize Strategic Initiative funds for work related to PLSS completion and integration.
- Reduce the re-visit time for section corners and tiesheet updates in the remonumentation program administered by the County Surveyor.
- Improve the accuracy of parcel mapping by Register of Deeds and GIS staff.
- Departments affected: Surveyor, Register of Deeds, Planning and Zoning.

Objectives/Measure of Success

- Completion of remonumentation with survey-grade coordinates.
- Integration of PLSS into parcel map by 2022.

Project Timeframes

Timeline – Project Plan for PLSS		
Milestone	Duration	Date
Project start	–	April 1, 2019
Hire contractor	1 month	April 1-30, 2019
Re monumentation	1 year	May 1, 2019-March 1, 2020
Project complete	–	March 1, 2020

Responsible Parties

- County Surveyor (10%) and Surveying contractor(s) (90%)

Estimated Budget Information

- See table at the end of this chapter.

Project #1: Digital Orthophotography

Project Description/Goal

- Collect color digital orthophotography in 2020
- **Land Info Spending Category:** Orthoimagery

Business Drivers

- Critical to assessment, land use planning, emergency services, and other activities involving land cover.
- Strategic initiative grant eligible.
- Valuable tool for land management efforts of citizens.
- Supports update of many foundational elements (road centerlines, land use).
- Departments affected: Planning and Zoning, Parks, Highway, Sheriff, Register of Deeds.

Objectives/Measure of Success

- Obtain color orthoimagery in the spring of 2020.

Project Timeframes

Timeline – Project #1 Digital Orthophotography		
Milestone	Duration	Date
Project #1 start	–	April, 2020
Collect imagery	1 week	April – May, 2020
Process imagery	6 months	May–November, 2020
Project complete	–	November, 2020

Responsible Parties

- GIS Coordinator (5%), Contractor (95%)

Estimated Budget Information

- See table at the end of this chapter.

Project #2: Develop thematic online mapping services

Project Description/Goal

- Publish online mapping services for bicycle routes, capital improvements projects, and supervisory districts.
- **Land Info Spending Category:** Website development/Hosting services.

Business Drivers

- Advance implementation of bicycle plan by publishing proposed routes.
- Inform citizens and decision makers of where capital improvement money is spent.
- Inform citizens of their local government representative
- Departments affected: Planning and Zoning, Finance, Highway, County Clerk.

Objectives/Measure of Success

- Three new services are published.
- Consistent interest shown in usage statistics.

Project Timeframes

Timeline – Project #2 Develop thematic online mapping services		
Milestone	Duration	Date
Project #2 start	–	January, 2019

Bicycle routes	1 month	January 1-31, 2019
Capital improvement projects	3 months	March 1, 2019 - May 31, 2019
Supervisory districts	1 month	August 1, 2019 – August 31, 2019
Project complete	–	August 31, 2019

Responsible Parties

- GIS coordinator (100%)

Estimated Budget Information

- See table at the end of this chapter.

Project #3: Document imaging improvements

Project Description/Goal

- Scan private on-site waste treatment systems (POWTS) permit files and zoning permit files to and image management system and make them available online.
- **Land Info Spending Category:** Other parcel work, Website Development/Hosting Services.

Business Drivers

- Scanning POWTS, board of adjustment, and zoning files will improve access and efficiency.
- Document images will be publicly available online.
- POWTS, Board of Adjustment, and zoning records are necessary for understanding property rights.
- POWTS files and some zoning files are still only on paper which limits access.
- Departments affected: Planning and Zoning, Register of Deeds, Information Technology

Objectives/Measure of Success

- Documents are available online and searchable by name, parcel number, and address.

Project Timeframes

Timeline – Project #3 Document imaging improvements		
Milestone	Duration	Date
Project #3 start	–	July 1, 2019
Scan documents	6 months	July 1–December 31, 2019
Make documents available online	1 month	January , 2020
Project complete	–	January 31, 2020

Responsible Parties

- Information Technology Department (25%), Zoning staff/Scanning vendor (50%), GIS coordinator (25%)

Estimated Budget Information

- See table at the end of this chapter.

Project #4: Index documents by geography

Project Description/Goal

- To expand the use of document imaging and GIS to geolocate documents (such as permits) and make them available to the public via the Internet.
- **Land Info Spending Category:** Other Parcel work and Website development/hosting services.

Business Drivers

- Index permit documents independent of parcel numbers.
- Increase efficiency of Zoning Department with geocoded permits.
- Permits and Board of Adjustment records are necessary for understanding property rights.

- Departments affected: Planning and Zoning, Information Technology, Register of Deeds.

Objectives/Measure of Success

- Permits 100% geocoded
- Geographically indexed apps available on the county website

Project Timeframes

Timeline – Project #4 Index documents by geography		
Milestone	Duration	Date
Project #4 start	–	January 1, 2020
Geolocate documents	3 months	January 1–March 31, 2020
Build apps	3 months	April 1–June 30, 2020
Project complete	–	June 30, 2020

Responsible Parties

- GIS Coordinator (80%), Information Technology staff (20%)

Estimated Budget Information

- See table at the end of this chapter.

Project #5: GPS equipment update

Project Description/Goal

- Replace aging GPS equipment with new decimeter capable system.
- **Land Info Spending Category:** Hardware, Software

Business Drivers

- Field mapping is key to zoning, land conservation, parks and highway department activities.
- Existing equipment is not compatible with current computers.
- Departments affected: Planning and Zoning, Parks, Highway, Surveyor.

Objectives/Measure of Success

- Equipment is purchased.
- Staff are trained in its use.

Project Timeframes

Timeline – Project #5 GPS equipment update		
Milestone	Duration	Date
Project #5 start	–	July 1, 2020
Purchase GPS equipment	1 month	July 1–July 31, 2020
Training	1 day	August, 2020
Project complete	–	August, 2020

Responsible Parties

- GIS Coordinator (90%), Surveyor (10%)

Estimated Budget Information

- See table at the end of this chapter.

Project #6: Flood map improvement

Project Description/Goal

- Update flood mapping using LiDAR elevation data
- **Land Info Spending Category:** LiDAR

Business Drivers

- Current flood mapping does not use the most accurate elevation data available.
- Discrepancies between LiDAR elevations and floodplain mapping cause problems when administering the floodplain zoning ordinance.
- Departments affected: Planning and Zoning, Highway, Surveyor.

Objectives/Measure of Success

- FEMA FIRMs are updated using LiDAR elevation data

Project Timeframes

Timeline – Project #6 Floodplain map improvement		
Milestone	Duration	Date
Project #6 start	–	January 1, 2021
Hire Contractor	1 month	February, 2021
Remap flood hazard	1 year	February, 2022
Certify new FIRMs	6 months	February – August, 2022
Project complete	–	August, 2022

Responsible Parties

- GIS Coordinator, Contractor, FEMA/WiDNR

Estimated Budget Information

- See table at the end of this chapter.

Project #7: Ongoing technology expenditures

Project Description/Goal

- Maintain up-to-date hardware and software
- **Land Info Spending Category:** Hardware, Software

Business Drivers

- Subscription grants access to technical support.
- New technologies help advance the Land Records program.
- Hardware must be replaced regularly to remain serviceable.
- Departments affected: Planning and Zoning, Information Technology, Surveyor, Register of Deeds.

Objectives/Measure of Success

- Up-to-date, reliable hardware and software

Project Timeframes

- This project is ongoing

Responsible Parties

- GIS Coordinator, Information Technology, Register of Deeds

Estimated Budget Information

- See table at the end of this chapter.

