Polk 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 Polk County prepared by the land information officer (LIO) and the Polk 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 2017, Polk County was awarded $70,944 in WLIP grants and retained a total of $87,480 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 Polk 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, provides geospatial information to the public, and a host of other citizen services. The Polk County land information system integrates and enables efficient access to information that describes the physical characteristics of land, as well as the property boundaries and rights attributable to landowners.

Mission of the Land Information Office. In the next three years, Polk County's Land Information Office strives to be recognized for its exceptional webmapping 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 Office Projects. To realize this mission, in the next three years, the county land information office will focus on the following projects:

Polk County Land Information Projects: 2019-2021	
Project #1	Produce new hydrographic layers per the 2015 LiDAR derivatives
Project #2	Produce new general purpose zoning district map layer per new hydrographic layers
Project #3	PLSS monument maintenance, parcel mapping maintenance (including accuracy improvements), and tie sheet maintenance
Project #4	2020 orthoimagery collection and delivery
Project #5	Produce Comprehensive Planning maps
Project #6	Incorporate NG9-1-1 NENA or WLIA Technical Committee data model for the Address Point and Street Centerline layers
Project #7	ROD real estate document tract index scanning
Project #8	Complete neighborhood/subdivision layer for geographic indexing of non-recorded documents by geography in GIS
Project #9	Complete zoning permit scanning for indexing of documents by geography in GIS
Project #10	Migrate all GIS datasets over to the Esri local government data model or NG9-1-1 data model
Project #11	Implementation of a permit management software for land use and POWTS permits
Project #12	GIS website hosting service and software maintenance
Project #13	Land Records Management software hosting services and maintenance

Project #14	**Register of Deeds document indexing maintenance services**
Project #15	**Back index Grantor/Grantee image index prior to mid-1995 and legal description**
Project #16	**Web Server Replacement**
Project #17	**Implement Monarch/GCS Integration Product**

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

County Land Information System History and Context

The history of land information in Polk County was based on fulfilling the foundational elements in a logical and efficient manner. In 1995, the County focused their efforts on establishing a geodetic frame, User Densification Network, from which the Public Land Survey Monuments are referenced. The County decided early in the program that no parcel would be mapped until the frame of each section was based upon survey grade coordinate values. Mapping of parcel occurred in the AutoCAD environment until 2011 when the County migrated to an Esri geodatabase parcel map which enhanced the production, daily management, and public delivery of the parcel fabric. In 2017, the initial countywide parcel mapping project was completed; however, ongoing management is continuous.

Since 1996, aerial photography has been obtained at least every five years, to enhance the production of the parcel layer, build and manage GIS datasets, and to assist many public and private agencies in their day to day operations. The County shifted the collection year in 2010, so imagery would coincide with the U.S. Census decennial collection years. The next aerial imagery acquisition year is planned for 2020. Aerial photography products are made readily available to the public via county GIS.

In 2007, the County deployed their first ever interactive GIS webmapping application. Versions of this application are still hosted and managed today.

Scanning of all corner restoration sheets and maps filed in the County Surveyor's Office are completed, managed, and made online. Since 2015, efforts to back scan zoning permits have been underway and are made available by individual parcel via the GIS webmapping site.

Since 2015, the County has operated a GIS Data Portal that made available multiple GIS land asset mapping records. The public now has a simple access point for many of the commonly managed GIS datasets.

In 2015, along with collecting 6" aerial orthoimagery, the County collected and obtained LiDAR data. Efforts have been underway to build new hydrography layers that are spatially calculated for mapping and zoning purposes.

In 2016, the RESPEC tracking software was implemented by the County to track locations and type of hard conservation practices like manure pits, barnyards, waterways, etc., soft conservation practices like no-till and nutrient management, also nonmetallic mines, shoreland restorations, AIS signs, etc. Data attached to each item includes such things as phosphorus reduction, operation and maintenance plan, pictures, notes, inspection times, etc.

Combined with document indexing, and the placement of land records online, and multiple other milestones, the land records modernization program has been a staple of core government services in Polk County.

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

Polk County Land Information Council and Plan Workgroup				
Name	**Title**	**Affiliation**	**Email**	**Phone**
+ **Steve Geiger**	Interim Land Information Officer / County Surveyor	Polk County Land Information Office	Surveyor@co.polk.wi.us	715-485-9260
+ **Sally Spanel**	Register of Deeds	Polk County Register of Deeds	sally.spanel@co.polk.wi.us	715-485-9252
+ **Amanda Nissen**	County Treasurer	Polk County Treasurer's Office	amandan@co.polk.wi.us	715-485-9254
+ **Paula Fedder**	Real Property Lister	Polk County Land Information Office	paulafedder@co.polk.wi.us	715-485-9284
+ **Kim O'Connel**	County Board Member	Polk County Records Committee Chairman	kimoconnell56@yahoo.com	715-755-3145
+ **Tom Hartmann**	Realtor	Century 21 Premier Group	tomhartmannrealtor@gmail.com	715-222-1752
+ **Kathy Poirier**	Emergency Management Coordinator	Polk County Sheriff's Office	Kathy@co.polk.wi.us	715-485-8280
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+ **Debbie Peterson**	Maintenance, Solid Waste, and Parks Director	Polk County Maintenance, Solid Waste, and Parks Office	DEB@co.polk.wi.us	715-485-9278
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+ 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.

FOUNDATIONAL ELEMENTS

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

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

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	• 3,100±
Number and percent of PLSS corners capable of being remonumented in your county that **have been remonumented**	• 3,069 / 99%
Number and percent of remonumented 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	• 3,069 / 100%
Number and percent of survey grade PLSS corners integrated into county digital parcel layer	• 3,069 / 100%
Number and percent of non-survey grade PLSS corners integrated into county digital parcel layer	• 0 / 0%
Tie sheets available online?	• Yes, http://polkcowi.wgxtreme.com/
Percentage of remonumented PLSS corners that have **tie sheets available online** (whether or not they have corresponding coordinate values)	• 99%
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	• 99%
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	• 60
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	• 266
Number and percent of PLSS corners remonumented along each county boundary	• 266 / 100%
Number and percent of remonumented PLSS corners along each county boundary with survey grade coordinates	• 266 / 100%
In what ways does your county collaborate with or plan to collaborate with neighboring counties for PLSS updates on shared county borders?	• Direct collaboration with neighboring County Surveyors by providing curtesy updates as known changes occur.

Custodian

- Department of Land Information.

Maintenance

- Cycle back to corners based on date of last visit for those that have the highest probability in needing maintenance, e.g., within a road right of way.

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

- **Complete.**
- In 1997 the County completed geodetic densification from stations within the Wisconsin High Accuracy Reference Network (HARN). The user densification network consists of nearly 70 - 1 & 2 & 4 ppm stations which were established using the 'Guidelines to Support Densification of the WI High Accuracy Reference Network (HARN) using Global Positioning System (GPS) Technology' standards specifications which were current at that time. There is adequate horizontal geodetic control strategically placed throughout the County to meet County and other user needs. Additionally, all of the original 70 geodetic control stations are part of the National Spatial Reference System. The County aids in along with the National Geodetic Survey and WISDOT custodial responsibility for the Polk County User Densification Network.
- In 2015 Polk County aided WISDOT and MNDOT in the placement of a new Continually Operating Reference Station, on county property, that is integrated into both the WISCORS and MNCORS networks.

Custodian

- Department of Land Information.

Maintenance

- The County Surveyor is also aiding NGS and WISDOT in the custodial responsibility of the Wisconsin Height Modernization network points.
- Federal monuments are not maintained by the County, however the County Surveyor has helped in the maintenance efforts in the past.

Standards

- Chapter 236 of Wisconsin Statutes.

Parcel Mapping

Parcel Geometries

Layer Status

- **Progress toward completion/maintenance phase:** In Polk County, 100% of the county's parcels are available in a commonly-used digital GIS format.
- **Projection and coordinate system:** Polk County - Transverse Mercator North American Datum (NAD) 83 (1991) High Accuracy Reference Network (HARN) Wisconsin Coordinate Reference Systems (WISCRS) US Survey 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.
- **Esri Parcel Fabric/LGIM Data Model:** The County does plan to implement the Esri Parcel Fabric Data Model, and/or Esri's Local Government Information Model as time permits.
- **WebGUIDE Xtreme (WGX)** – from contractor/vendor Applied Data Consultants.

- **Unique URL path for each parcel record:** Yes.
  - Assessment data, Interactive Map, Parcel Report, Permits (Administrative Appeal, Conditional Use, Land Use, Sanitary, Subdivision, Tower, Variance, and Zoning District Change), Recorded Document Information, Tax Bill, and Zoning Districts.
  - URL is stable.
  - Yes, unique URL values could be exported.

Custodian

- Department of Land Information.

Maintenance

- **Update Frequency/Cycle:** Continually updating as additional control is obtained and as deeds, plats, and surveys are recorded.

Standards

- **Data Dictionary:** WLIA Standard - Digital Parcel Mapping Data Content Standards, Version: Adopted – March, 1999.
- Department of Land Information Policy.

Assessment/Tax Roll Data

Layer Status

- **Progress toward completion/maintenance phase:** The County manages both the assessment and tax roll data.
- **Property Assessment & Tax Billing Module** – from contractor/vendor GCS Software Inc.
- **Municipal Notes:** NA

Custodian

- Department of Land Information and Department of Treasurer.

Maintenance

- **Maintenance of the Searchable Format standard:** To maintain the Searchable Format standard, the county will continue implementing its standardized tax roll entry methods. Annual review and cleanup of the tax database is required to insure compatibility.
- **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.

Standards

- Wisconsin Department of Revenue Property Assessment Manual and attendant DOR standards.
- DOR XML format standard requested by DOR for assessment/tax roll data.
- Department of Land Information and Department of Treasurer entry policies.

Non-Assessment/Tax Information Tied to Parcels

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

Layer Status

- **38% Zoning Permits Scanned.**
- In 2015 Polk County began to back scan zoning permits. Permits are tied to the parcel and made available by geography in the GIS.

Custodian

- Department of Land Information.

Maintenance

- Ongoing project as time allows.

Standards

- 300 dpi pdf scans and removal of social security numbers. Department of Land Information policy.

ROD Real Estate Document Indexing and Imaging

Layer Status

- **Grantor/Grantee Index:** Indexed from mid-1995 forward. Prior to 1995 is paper index.
- **Tract Index:** PLSS-based tract indexed from mid-1995 forward. Prior tract index is paper based.
- **Imaging:** TIFF images for documents; scanned from approximately 1933 and forward.
- **Laredo/Tapestry** – from contractor/vendor Fidlar.

Custodian

- Department of Register of Deeds.

Maintenance

- Offsite replication – user provided assistance in quality control of date. Software vendor reviews for technology changes.

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:** 2015
- **Accuracy:** Bare earth LiDAR surface met FEMA vertical accuracy standards (0.61 feet RMSEz using FEMA compliant/NSSDA testing procedures)
- **Contractor's standard, etc.:** Ayres Associates provided Polk County, Wisconsin, with LIDAR based topographic mapping services in the spring of 2015 as part of WROC. The LiDAR data was collected using a Leica ALS 70 sensor mounted in a fixed-wing aircraft. The LiDAR data was delivered according to a 5,000 foot x 5,000 foot tile schematic. The LiDAR data was calibrated using information collected at the time of flight from GPS base stations on the ground and airborne GPS/IMU in the aircraft. The calibrated LiDAR data was processed to a classified point cloud, bare earth DTM, DEM, DSM, contours, breaklines, and intensity images. LiDAR was acquired to produce an accurate bare earth surface and to generate 2-ft contours to support county land information efforts.
- LiDAR processing utilizes several software packages, including GeoCue and the TerraSolid suite of processing components. The GeoCue software is a database management system for housing the LiDAR dataset (usually multiple gigabytes in size). GeoCue incorporates a thorough checklist of processing steps and quality assurance/quality control (QA/QC) procedures that assist in the LiDAR workflow. The TerraSolid software suite is used to automate the initial classification of the LiDAR point cloud based on a set of predetermined parameters. Lidar technicians refer to ground cover research (natural and cultural features) within the project area and determine algorithms most suitable for the initial automated LiDAR classification. (Some algorithms/filters recognize the ground in forests well, while others have greater capability in urban areas). During this process each point is given an initial classification (e.g., as ground, vegetation, or noise) based on the point's coordinates and the relation to its neighbors. Classifications to be assigned include all those outlined by ASPRS standards. The initial classifications produce a coarse and inexact dataset, but offer an adequate starting point for the subsequent manual classification procedure. During this step, "overlap" points are automatically classified (those originating from neighboring flightlines) using information gathered from the ABGPS and IMU data. Any duplicate points existing from

adjacent flightlines are removed during this process. Hydrographic breaklines are collected using LiDARgrammetry to ensure hydroflattened water surfaces. This process involves manipulating the LiDAR data's intensity information to create a metrically sound stereo environment. From this generated "imagery", breaklines are photogrammetrically compiled. Breakline polygons are created to represent open water bodies. The LiDAR points that fall within these areas are classified as "water." Breaklines representing streams and rivers shall be smooth, continuous, and monotonic, and represent the water surface without any stair steps except for dams and rapids. All hydrographic breaklines include a 1 foot buffer, with the points being re-classified as Class 10 (ignored ground). TerraSolid is further used for the subsequent manual classification of the LiDAR points allowing technicians to view the point cloud in a number of ways to ensure accuracy and consistency of points and uniformity of point coverage. A triangulated irregular network (TIN) model was created from the Bare Earth LAS and breaklines. The TIN was processed to create two-foot contours.

- **Next planned acquisition year:** Not planned

Custodian

- Department of Land Information.

Maintenance

- There are no plans to alter the original data deliverables from Ayres and Associates. The original unaltered data deliverables will be stored on an internal Polk County tape backup.

Standards

- FEMA vertical accuracy standards (0.61 feet RMSEz using FEMA compliant/NSSDA testing procedures).

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

- **Layers completed.**
  - 2-foot contours by tile in ESRI shapefile format.
  - Hydro-flattened breaklines in ESRI shapefile format.
  - Digital Elevation Model (DEM) in ESRI GRID format.
  - Digital Surface Model (DSM) in ESRI GRID format.
  - Intensity images in ESRI GRID format.
  - Ground control locations in ASCII format.
  - FGDC compliant metadata.
  - Tile Schematic in Esri shapefile format.

Custodian

- Department of Land Information.

Maintenance

- There are no plans to alter the original data deliverables from Ayres and Associates. The original unaltered data deliverables will be stored on an internal Polk County tape backup.

Standards

- FEMA vertical accuracy standards (0.61 feet RMSEz using FEMA compliant/NSSDA testing procedures).

Other Types of Elevation Data

Layer Status

- Polk County does <u>not</u> have other types of elevation data.

Custodian

- NA

Maintenance

- NA

Standards

- NA

Orthoimagery

Orthoimagery

Layer Status

- **Most recent acquisition year:** 2015.
- **Resolution:** 6-inch.
- **Contractor's standard:** Polk County retained Ayres Associates to acquire digital aerial imagery, using a calibrated digital photogrammetric camera. Imagery was collected with full stereo-coverage, 30% sidelap and 60% forward overlap (+/- 5%). Control was collected for the project using Inertial Measurement Unit (IMU), Airborne Global Positioning Systems (ABGPS), and ground-based GPS technology. Prepared an analytical aerotriangulation solution for the aerial imagery to support digital orthoimagery meeting American Society for Photogrammetry and Remote Sensing (ASPRS) Class II standards for the appropriate mapping scale.
- The aerial imagery was acquired during leaf-off conditions and when the sun angle was 30 degrees or greater above the horizon.
- The tiling structure follow PLSS sections, delivered in uncompressed, TIFF format (with world file) and is accompanied by a tiling schematic in Esri format. Also, included are MrSID format compressed mosaics of the tiles and the entire project area. Imagery deliverables extend 500 feet beyond the County boundary in the south, east, and north and 1000 feet in the west along the St Croix River boundary.
- **Next planned acquisition year:** 2020.
- **WROC participation in 2020:** Confirmed participating in WROC 2020.

Custodian

- Department of Land Information.

Maintenance

- There is no plan to alter the original data deliverables from Ayres and Associates. The original unaltered data deliverables are stored on an internal Polk County server and tape backup.

Standards

- 6-inch resolution 3-band digital orthoimagery for 1"=100' scale mapping for the Polk County project area which meets ASPRS Class II horizontal standards ((2.0 feet RMSE using the National Standard for Spatial Data Accuracy (NSSDA) testing procedures)).
- The product is referenced to the Wisconsin County Reference System (WISCRS) – Polk County Coordinates; North American Datum 1983 (HARD); and vertically geo-referenced to the North American Datum 1988, US Survey Feet.

Historic Orthoimagery

Layer Status

- **Layer complete**
- **Acquisition year:** 2010
- **Resolution:** 12-inch
- Polk County retained Ayres Associates to acquire digital aerial photography during the spring of 2010 suitable for the production of color orthophotography at a 12-inch ground pixel resolution (approximately 956 sq. miles). The photography was obtained during leaf off conditions and when there was no snow on the ground. Control for the project was collected

using Airborne Global Positioning System (ABGPS), and ground-based GPS technology. The horizontal and vertical coordinates is referenced to the County coordinate system (NAD83 in U.S. Survey Foot) and NAVD88. The digital orthophotography meets or exceeds National Map Accuracy Standards for 1"=200' scale mapping.

- **Layer complete**
- **Acquisition year:** 2006
- **Resolution:** 12-inch
- Polk County digital orthophotos were created by Ayres Associates of Madison, Wisconsin. The imagery was collected in two days on 4/14/06 and 10/27/06. The flight altitude for the project was 10,000 feet above mean terrain with a negative scale of 1"=1,666'. Ayres Associates completed an aerotriangulation (AT) solution using Air Borne GPS data and surveyed ground control points. A fully analytical simultaneous least squares adjustment was completed for the entire block of aerial photography using Intergraph ISAT software. All AT processing was done on a digital photogrammetric workstation and the resulting AT solution is suitable for rectification of the aerial photography. Using Intergraph digital orthophotography software, Ayres Associates rectified the imagery to an existing digital terrain surface which was prepared through stereo compilation by Ayres Associates in 1998. Imaging mosaicing was accomplished by a combination of automated and manual methods. Manual image editing was completed to correct warped bridges and other rectification and mosaicing related issues. Finally, tonal balancing was performed on individual tiles, as well as the project as a whole. Original imagery was prepared in Wisconsin State Plane coordinates and reprojected to Wisconsin county coordinates. The final resolution of the orthophotography is 12 inch pixel. The orthophotography was compiled to meet National Map Accuracy Standards for 1"=200' scale mapping.
- **Layer complete**
- **Acquisition year:** 2001
- **Resolution:** 18-inch
- Polk County digital orthophotos were created by Ayres Associates of Madison, Wisconsin. Polk County was flown in April 2001 at a height of 15,840 feet, resulting in a photo scale of 1 inch equals 2,640 feet and a digital orthophoto resolution of 18 inch pixels. A Wild RC39 camera was used with a lens serial number of 5319, and a camera focal length of 153.472. The photography type was black/white, with a photo coverage of 60% endlap, and 30% sidelap. Data was provided in the custom Polk County Coordinate System.
- **Layer complete**
- **Acquisition year:** 1996
- **Resolution:** 1-meter
- Polk County digital orthophotos were created by Ayres Associates of Madison, Wisconsin. Polk County was flown in May 1996 at a height of approximately three miles, resulting in a photo scale of 1:31,680 and a digital orthophoto resolution of one meter pixels. Data was provided in the custom Polk County Coordinate System.

Custodian

- Department of Land Information.

Maintenance

- There is no plan to alter the original data deliverables from Ayres and Associates. The original unaltered data deliverables are stored on an internal Polk County server and tape backup.

Standards

- Referenced under layer status.

Other Types of Imagery

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

Layer Status

- National Agriculture Imagery Program (NAIP) Farm Service Imagery 2003-2017.

- WIDNR Aerial Photo Slides 1979-2002. Polk County obtained aerial imagery through a licensed data exchange with the WIDNR. The aerial imagery includes 20,000 historic slides from 1979-2002. Data distribution limits apply.
- USDA/USGS 1937-2010. Polk county has obtained various historic aerial images from the U.S. Department of Agriculture and the U.S. Geological Survey (USGS) from 1937-2010. The Aerial Photography Single Frame Records collection is a large and diverse group of imagery acquired by Federal organizations from 1937 to the present. Over 6.4 million frames of photographic images are available for download as medium and high resolution digital products. The high resolution data provide access to photogrammetric quality scans of aerial photographs with sufficient resolution to reveal landscape detail and to facilitate the interpretability of landscape features. Individual photographs vary in scale, size, film type, quality, and coverage. Purpose: USGS and Non USGS aerial photography were collected for various government projects such as mapping.

Custodian

- Department of Land Information.

Maintenance

- The original unaltered data deliverables are stored on an internal Polk County server and tape backup.

Standards

- NA

Address Points and Street Centerlines

Address Point Data

Layer Status

- **Maintenance phase.**
- The County does maintain a GIS representation of address points.
- The Division of Zoning within the Department of Land Information assigns new address based on the property access point from a named/numbered public or private road. The zoning staff collects a GPS point at the main property access point and assigns a new house/fire number per the Polk County Uniform Rural Addressing and Road Numbering System as adopted by the County Board of Supervisors in 1978. The GIS division uploads the GPS field data and adds the information to the address inventory map layer. The address inventory map layer is maintained in an Esri geodatabase format. In cooperation with the Sheriff Department, the Land Information Department verifies that the addresses are Master Street Addressing Guide (MSAG) compliant. The Sheriff Department is responsible for maintaining the MSAG. The 911 call center uses a mapping system provided by New World Systems.

Custodian

- Department of Land Information.

Maintenance

- As needed. Bi-weekly updates are sent to the 911 dispatch mapping system.

Standards

- Polk County Uniform Rural Addressing and Road Numbering System as adopted by the County Board of Supervisors in 1978.
- Mapped in accordance to GeoComm St. Cloud, MN; New World Systems Troy, MI; National Emergency Numbering Association Alexandria, VA; and Polk County Dept. of Land Information policy.
- The County does plan to migrate to the NENA NG9-1-1 GIS Data Model or the WLIA Technical Committee Data Model as time permits.

Building Footprints

Layer Status

- Polk County does not have a building footprints layer.

Other Types of Address Information

e.g., Address Ranges

Layer Status

- **Maintenance phase.**
- The County does maintain a GIS representation of site address points.
- The Site Address Point layer is an aid to the Address Point Data layer. The Site Address point is placed on the map where the principal structure or unimproved parcel is located for each property address.

Custodian

- Department of Land Information.

Maintenance

- As needed. Bi-weekly updates are sent to the 911 dispatch mapping system.

Standards

- Polk County Uniform Rural Addressing and Road Numbering System as adopted by the County Board of Supervisors in 1978.
- Esri Local Governments Data model and Polk County Dept. of Land Information policy.
- The County does plan to integrate the NENA NG9-1-1 GIS Data Model or the Wisconsin Department of Military Affairs Data Model as time permits.

Street Centerlines

Layer Status

- **Maintenance phase**
- The County does maintain a GIS representation of the road system.
- Address number ranges are included in the centerline database to support locator, geocoding, or geoverification services.

Custodian

- Department of Land Information.

Maintenance

- As needed. Bi-weekly updates are sent to the 911 dispatch mapping system.

Standards

- Polk County Uniform Rural Addressing and Road Numbering System as adopted by the County Board of Supervisors in 1978.
- Mapped in accordance to GeoComm St. Cloud, MN, New World Systems Troy, MI, National Emergency Numbering Association Alexandria, VA standards, and Polk County Dept. of Land Information policy.
- The County does plan to migrate to the NENA NG9-1-1 GIS Data Model or the WLIA Technical Committee Data Model as time permits.

Rights of Way

Layer Status

- **Maintenance phase.**
- The County does maintain a GIS representation of the right of ways.
- The right-of-way of public roads is developed as part of the parcel mapping process.

Custodian

- Department of Land Information.

Maintenance

- As needed. Managed within the parcel polygon feature.

Standards

- WLIA Standard - Digital Parcel Mapping Data Content Standards, Version: Adopted – March, 1999.

Trails

Layer Status

- **Maintenance phase.**
- The County does maintain a GIS representation of the recreational trail system.

Custodian

- Department of Land Information.

Maintenance

- As needed or time permits.

Standards

- Department of Land Information data model and policy. Large scale orthophotography trail centerline adjustment or GPS collection is always desirable.

Land Use

Current Land Use

Layer Status

- Patchwork of various city, county, town, and village current land use layers per community comprehensive planning process.

Custodian

- Department of Land Information.

Maintenance

- As directed by the Polk County Planner or as time permits.

Standards

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

Future Land Use

Layer Status

- Patchwork of various city, county, town, and village future land use layers per community comprehensive planning process.

Custodian

- Department of Land Information.

Maintenance

- As directed by the Polk County Planner or as time permits.

Standards

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

Zoning

County General Zoning

Layer Status

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

Custodian

- Department of Land Information.

Maintenance

- As directed by the Polk County Zoning Administrator.

Standards

- Mapped in accordance with the Polk County Zoning Ordinance.

Shoreland Zoning

Layer Status

- **Maintenance phase.**
- The County does maintain a GIS representation of county shoreland zoning boundaries. Shoreland mapping is buffered 1000' from lakes and 300' from streams. All 24 towns in the county are covered by the Shoreland Protection Zoning Ordinance.

Custodian

- Department of Land Information.

Maintenance

- As directed by the Polk County Zoning Administrator.

Standards

- Mapped in accordance with the Polk County Shoreland Protection Zoning Ordinance.

Farmland Preservation Zoning

Layer Status

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

Custodian

- Department of Land Information.

Maintenance

- As directed by the Polk County Zoning Administrator.

Standards

- Mapped in accordance with the Polk County Zoning Ordinance.

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.
- **Limited Boundary Adjustment/Fill in Flood Fringe:** The boundaries of all floodplain districts are designated as A, AE, AH, AO, or A1-30 on the maps based on the Flood Insurance Study (FIS) and the revisions in the Polk County Floodplain Appendix. Any change to the base flood elevations (BFE) or any changes to the boundaries of the floodplain or floodway in the Flood Insurance Study (FIS) or on the Flood Insurance Rate Map (FIRM) must be reviewed and approved by the DNR and FEMA through the Letter of Map Change process before it is effective. No changes to regional flood elevations (RFE's) on non-FEMA maps shall be effective until approved by the DNR. These maps and revisions are on file in the office of the Polk County Zoning Department. If more than one map or revision is referenced, the most restrictive information shall apply.
- Compliance with the provisions if the Polk County floodplain ordinance shall not be grounds for removing land from a floodplain unless it is filled at least two feet above the regional or

base flood elevation, the fill is contiguous to land outside the floodplain, and the map is amended.

Custodian

- Department of Land Information.

Maintenance

- As directed by the Polk County Zoning Administrator.

Standards

- Flood Insurance Rate Maps (FIRM).
- Polk County Floodplain Zoning Ordinance.

Airport Protection

Layer Status

- Not administered by the County.
- Airport protection zoning map depicts: NA

Municipal Zoning Information Maintained by the County

e.g., Town, City and Village, Shoreland, Floodplain, Airport Protection, Extra-Territorial, Temporary Zoning for Annexed Territory, and/or Zoning Pursuant to a Cooperative Plan

Layer Status

- **Maintenance phase.**
- The County does maintain a GIS representation of the Sanitary and Zoning District layers for the Town of St Croix Falls.

Custodian

- Department of Land Information.

Maintenance

- As directed by the Town of St Croix Falls.

Standards

- Town of St Croix Falls zoning ordinance.

Administrative Boundaries

Civil Division Boundaries

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

Layer Status

- **Maintenance phase**
- The County does manage a GIS representation of the geographic area of each City, Town, and Village.
- Polk County has adjusted the data to share topology in the areas where survey grade PLSS corners have been collected.

Custodian

- Department of Land Information.

Maintenance

- As needed when survey control or annexations occur.

Standards

- Department of Land Information data model and policy.
- The County does plan to integrate the NENA NG9-1-1 GIS Data Model as time permits.

School Districts

Layer Status

- **Maintenance phase.**
- **Progress toward completion/maintenance phase:** The County does manage a GIS representation of the school districts.
- There is one polygon feature for each school district.
- **Relation to parcels:** The assessment database includes a special district code designating which parcels are within each school district and the school district layer has been adjusted to share topology with the parcel layer.
- **Attributes linked to parcels:** None

Custodian

- Department of Land Information.

Maintenance

- Maintenance occurs after the Wisconsin Department of Public Instruction certifies an order of school district reorganization.

Standards

- Department of Land Information data model and policy.

Election Boundaries

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

Layer Status

- **Maintenance phase.**
- The County does manage a GIS representation of the municipal wards and polling locations.

Custodian

- Department of Land Information.

Maintenance

- As directed by the Polk County Clerk.

Standards

- Municipal Wards: Legislative Technology Services Bureau data model.
- Polling Locations: Department of Land Information data model and policy.

Utility Districts

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

Layer Status

- Polk County does not have utility district layers.
- Utilities are responsible for creating their own data sets; however, the county generally makes all base data available.

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.**
- The county does manage the following GIS representation public safety layers. Emergency service districts layers for fire, law, emergency medical, and first responders; cell tower layer; clinic and hospital layers; driveway layer; DNR fire rangers district layer; emergency service providers layer for facility locations of each EMS, fire, first responders, and law; emergency shelter layer; exterior door numbering layer for critical facilities; fire tower layer; hazardous materials and hazardous materials volume zones; Islands; radio tower layer; railroad milepost

layer; red cross shelters layer; towing layer; trail waypoint layer; warning siren layer; and wireless sector layers.
- The county obtained the National Pipeline Mapping System (NPMS) data for dispatch mapping purposes only.

Custodian
- Department of Land Information.

Maintenance
- As directed by the Polk County Communications Administrator or as needed.

Standards
- New World Computer Aided Dispatch data models and Department of Land Information data models and policies.
- The County does plan to integrate the NENA NG9-1-1 GIS Data Model as time permits.

Lake Districts

Layer Status
- **Maintenance phase**
- The county does manage a separate GIS represented Lake District layer for each participating Lake District.

Custodian
- Department of Land Information.

Maintenance
- As needed or time permits.

Standards
- Department of Land Information data model and policy.

Native American Lands

Layer Status
- **Maintenance phase.**
- The county does manage a GIS represented Native American lands layer.

Custodian
- Department of Land Information.

Maintenance
- As needed or time permits.

Standards
- Department of Land Information data model and policy.

Other Administrative Districts

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

Layer Status
- **Maintenance phase.**
- The county does manage a GIS represented public lands layer.
- The layer includes the geographic areas of federal, state, county, city, village, town, conservancy, and school district lands.

Custodian
- Department of Land Information.

Maintenance
- As needed or time permits.

Standards

- Department of Land Information data model and policy.

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 county does manage a GIS represented hydrography layers known as hydrobody and hydrostream.

Custodian

- Department of Land Information.

Maintenance

- As needed or time permits. There is no plan to alter the original AutoCAD data deliverables from Ayres and Associates.

Standards

- The county was flown in May 1996 at a height of approximately three miles, resulting in a photo scale of 1:31,680 and a digital orthophoto resolution of one meter pixels. Ayres Associates digitized all hydrography features and provided this data as a two-dimensional AutoCAD drawing file. The data was provided in the custom Polk County Coordinate system. In 2006 Polk County converted the AutoCAD hydrography files into Esri shapefiles.
- Department of Land Information data model and policy.

Cell Phone Towers

Layer Status

- **Maintenance phase**
- The County does manage a GIS representation of the wireless cell tower locations; this layer has been identified as exempt from WI Statute 19.36(4).

Custodian

- Department of Land Information.

Maintenance

- As directed by the Polk County Communications Administrator or as needed.

Standards

- New World Computer Aided Dispatch data model and Department of Land Information data model and policy.
- The County does plan to integrate the NENA NG9-1-1 GIS Data Model as time permits.

Bridges and Culverts

Layer Status

- **Maintenance phase.**
- The County does manage GIS representations of culverts and traffic road signs.
- The Bridge data is managed through the Highway Structure Information System (HIS) by Ayres Associates

Custodian

- Culverts and traffic road signs: Highway Department.

Maintenance

- As needed.
- Culverts and traffic road signs: Highway Department.

- Bridges: Ayres Associates

Standards

- Culverts and traffic road signs standards per internal Simple Culvert and Simple Signs inventory software.
- Bridge standards per the Highway Structure Information System (HIS)

Other

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

Layer Status

- **Maintenance phase**
- The County does manage GIS representations of the following layers.
- Agricultural enterprise area; airport; assisted living facilities; ATV routes (county); bathymetric contours; boat landing; campground/resort; camps; cemeteries; daycare facilities; driveways; fish hatchery; fitness; food resources; government buildings; highway signs; historical sites; Islands; landmarks; libraries; lower st croix riverway district; maple syrup producers; mobile home parks; museum; no wake zones; non-metallic mines; nursing homes; nutrient management; places of worship; post offices; railroad centerline; recycling locations; recreation amenities; renewable energy locations; runways; rustic road centerline; schools; snowmobile trail centerline; st croix river buffer zone; senior centers; soils; substation; trail waypoint; water quality management areas (WQMA); watersheds; unincorporated village; well inspection sites; and well sites (historic).
- The county obtained the National Pipeline Mapping System (NPMS) data for dispatch mapping purposes only.

Custodian

- Department of Land Information and the Department of Land & Water.

Maintenance

- As directed by the Polk County Zoning Administrator.
- As needed or time permits.

Standards

- Natural Resource Conservation Service (NRCS).
- Polk County Lower St Croix Riverway Ordinance.
- Department of Land Information data models and policies.
- Department of Land and Water data models and policies.

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.

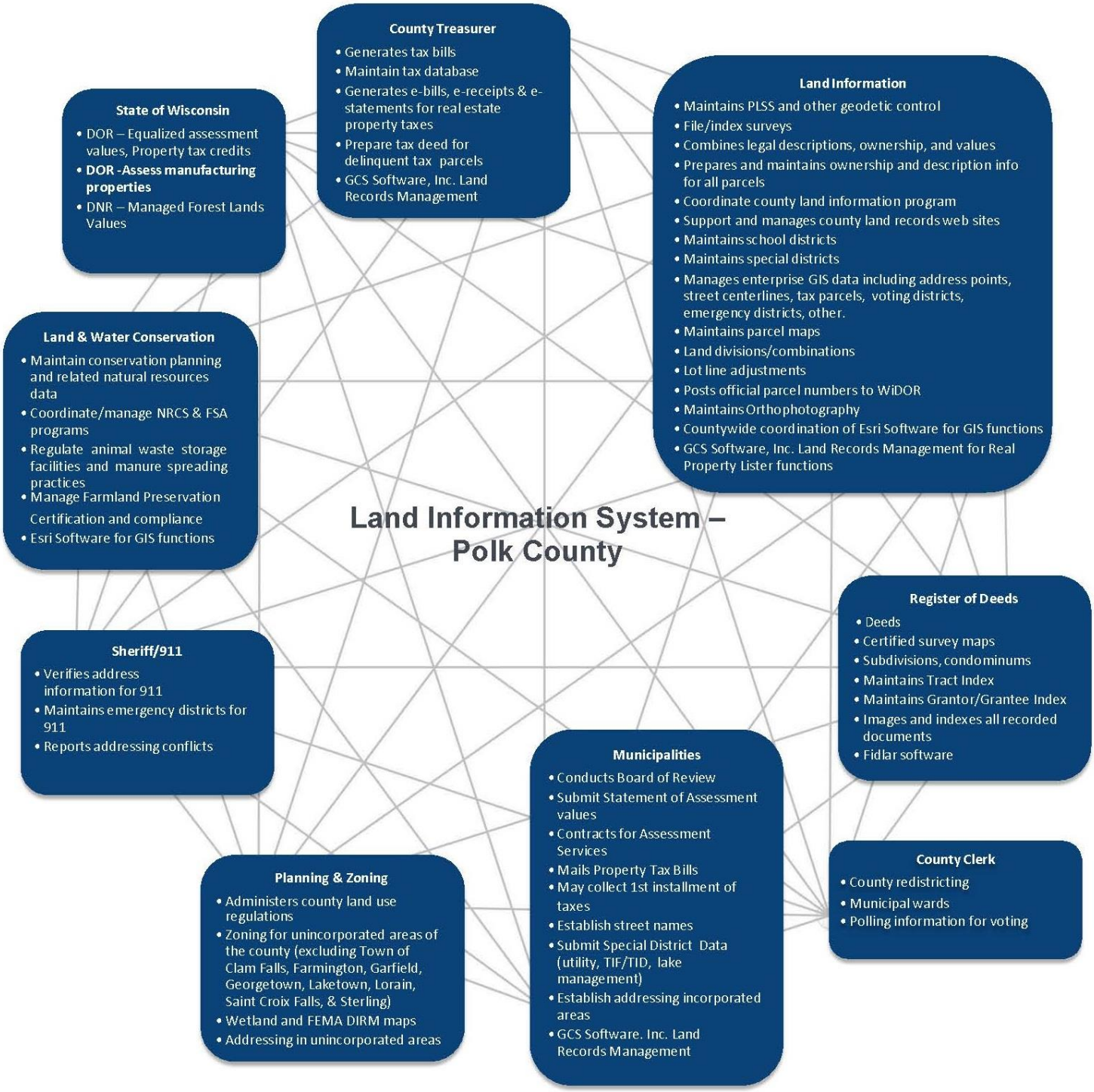
One integration requirement is listed under s. 16.967(7)(a)(1), Wis. Stats., which states that counties may apply for grants for:

- 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.

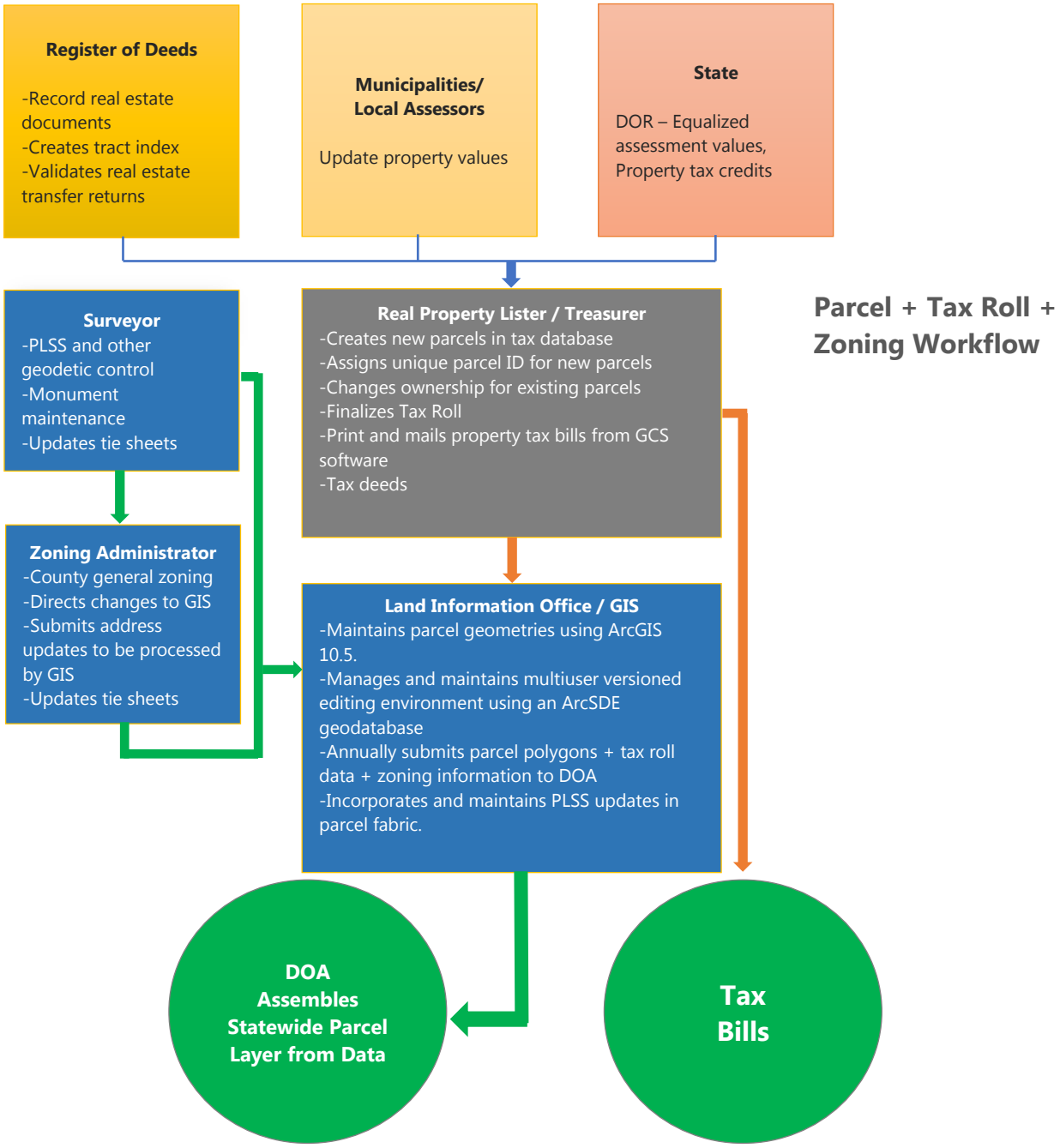
This chapter describes the design of the county land information system, with focus on how data related to land features and data describing land rights are integrated and made publicly available.

Current Land Information System

Diagram of Polk County Land Information System



Polk 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

- Polk County has two dedicated storage servers. The *pcgis* server stores all vector digital map layers and the *pcgs1503* server stores all raster/imagery and Lidar related data. The Polk County Information Technology Department saves a backup of each server on the following schedule. Backup schedule: Daily for one month, monthly for three months, quarterly (month end) for one year, and annually for seven years.
- The County also has a www2 web server used for multiple land record functions.

Software

- Polk County uses various levels of Esri's Arc Suite of GIS products for managing spatial land assets. The parcel fabric is managed using the Esri multiuser ArcSDE Server Standard Workgroup geodatabase versioned editing environment. The County also uses the Global Mapper GIS product for LiDAR data functions.
- The County manages land records documents using Fidlar Technologies products.
  - Avid land records management software is used by County staff to process, index, search documents, and for office accounting.
  - Laredo land records document search engine is a subscription service for online document searches and obtainment by the public.
  - Monarch, the county has begun the process to implement the monarch product that will conveniently transfer property information from the Avid land records management product to the GCS assessment tax records database.
  - Tapestry land records document search is a pay as you go service for online document searches and obtainment by the public.
- The County has implemented the GCS Land Records Management software for managing property records for assessment, tax billing, and tax collection. The web portal allows public access to property tax, document records, and permit information via the internet.
- RESPEC tracking software is used by the County to track location and type of hard conservation practices like manure pits, barnyards, waterways, etc., soft conservation practices like no-till and nutrient management, also nonmetallic mines, shoreland restorations, AIS signs, etc. Data attached to each item includes such things as phosphorus reduction, operation and maintenance plan, pictures, notes, inspection times, etc.

Website Development/Hosting

- Polk County contracts with Applied data Consultants, Eau Claire, to host our Land Assets using their WebGUIDE Xtreme (WGX) product. Dynamic map data is updated weekly and static map data is update quarterly.
- The County also uses the GCS software's Web Portal to offer property tax and document recording information to the public via the internet. It also allows users to pay their property taxes online and view GIS maps.

Metadata and Data Dictionary Practices

Metadata Creation

- **Metadata creation and maintenance process:** Description and restriction information are generally added once a feature map layer is produced. Additional manually populated fields are added as resources allow.

Metadata Software

- **Metadata software:** 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:**
  - Overview:
    - Item Description: Title, Tags, Summary, Description, Credits, Use limitations, and Approximate Scale Range.
    - Topics and Keywords: Topic Categories, Theme Keyword, Place Keywords, and Temporal Keywords.
    - Resource Citation: Titles, Presentation Form, and Dates created/published.
    - Resource Citation Contacts: Contacts Manager.
  - Metadata:
    - Contacts: Contact and Role.
    - Maintenance: Update Frequency.
    - Constraints: General Constraints.
  - Resources:
    - Details: Status and Credit.
    - Extent: Description.
    - Points of Contacts: Contact and Contact Information.
    - Resources Maintenance: Update Frequency.
    - Resource Constraints: General and Legal.
    - Data Quality: Scope Level.
    - Lineage: Statement.
    - Fields: Definition, Definition Source, and the Unpresentable Domain information.

Metadata Policy

- **Metadata Policy:** No specific policy.

Municipal Data Integration Process

- NA

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://polkcowi.wgxtreme.com/	https://www.co.polk.wi.us/landinfogisdataportal	http://www2.co.polk.wi.us/GCSWebPortal/search.aspx	https://www.co.polk.wi.us/rod

Single Landing Page/Portal for All Land Records Data
URL
https://www.co.polk.wi.us/landrecords

Data Sharing

Data Availability to Public

Data Sharing Policy

- The public may make verbal or written requests for public records to the Department of Land Information by contacting the records custodian, Steve Geiger, or the custodian's designee, at the Department of Land Information, Polk County Government Center, 100 Polk County Plaza, Suite 130, Balsam Lake, Wisconsin, 54810. Requests for public records may be made in person, by mail, by telephone at 715-485-9170, by facsimile transmission at 715-485-9246, by email at surveyor@co.polk.wi.us. The regular office hours of the Department of Land Information are 8:30 a.m. to 4:30 p.m. Monday through Friday (legal holidays excepted).
- Custodian's Designee: Brad Runeberg, GIS Coordinator, Department of Land Information, telephone: 715-485-9256, email: gis@co.polk.wi.us.

Open Records Compliance

- The Department of Land Information follows the **Wisconsin Public Records Law, Wisconsin State Statutes 19.32 through 19.39**, for the distribution of digital Geographic Information Systems (GIS) data (records).
- 19.32(2) defines a "**record**" to mean: any material on which written, drawn, printed, spoken, visual or electromagnetic information is recorded or preserved, regardless of physical form or characteristics, which has been created or is being kept by an authority. "**Record**" includes, but is not limited to, handwritten, typed or printed pages, maps, charts, photographs, films, recordings, tapes (including computer tapes), computer printouts and optical disks. "Record" does not include drafts, notes, preliminary computations and like materials prepared for the originator's personal use or prepared by the originator in the name of a person for whom the originator is working; materials which are purely the personal property of the custodian and have no relation to his or her office; materials to which access is limited by copyright, patent or bequest; and published materials in the possession of an authority other than a public library which are available for sale, or which are available for inspection at a public library.
- Polk County has compiled a list of popular GIS datasets for download on our county website (GIS data portal); however, some datasets are available only by contacting the Land Information office directly.

Data Sharing Restrictions and Government-to-Government Data Sharing

Data Sharing Restrictions

- Polk County recognizes the cost associated with GIS data collection, development, maintenance, and distribution. Therefore, for public interest, GIS datasets that Polk County has custodial responsibilities over, can be obtained for a minimal $25.00 processing fee by the public. Some data release restrictions may apply including, but not limited to, datasets that are deemed sensitive.
- All aerial photography requests are subject to a fee.

- Digital geographic data acquisition fees are published on the Land Information Fee Schedule as determined and approved by the Environmental Services Committee. A copy of the Land Information Fee Schedule is available from the Department of Land Information, or online. Full color plots and other standard output products are available and also listed on the Land Information Fee Schedule.
- When obtaining data through a License Agreement payment shall be acquired from the licensee prior to the release of the data.
- When distributing the data, a hard or digital copy of the license agreement, with all participating signatures, will be provided.

Government-to-Government Data Sharing

- As of January 1, 2014 a Licensee Agreement is no longer required for digital map data except for aerial photography requests.
- Aerial photography: Half price fee per the Polk County Land Information Fee Schedule.
- Special requests to format, lot or edit data will be charged at half the staff cost or $25.00 per hour with a half hour minimum, plus 10% for overhead. Estimates of the time needed to provide data or create a product will be provided upon request.

Training and Education

- We will continue to participate in video conferences, workshops, seminars, user groups, etc., as appropriate and where budget allows. We will continue to work with other counties and use the technical list server for technical assistance where more assistance is needed.
- The County has access to the Internet and e-mail that allows for use of the clearinghouse and technical assistance list server. The County is participating and will continue to monitor the development of the clearinghouse and standards adopted.
- Polk County will continue to participate in offerings of the Environmental Systems Research Institute (Esri), Wisconsin County Code Administrators (WCCA), Wisconsin Counties Surveyors Association (WCSA), Wisconsin Land Information Association (WLIA), Wisconsin Real Estate Listers Association (WRPLA), and Wisconsin Society of Land Surveyors (WSLS) for technical training.

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.

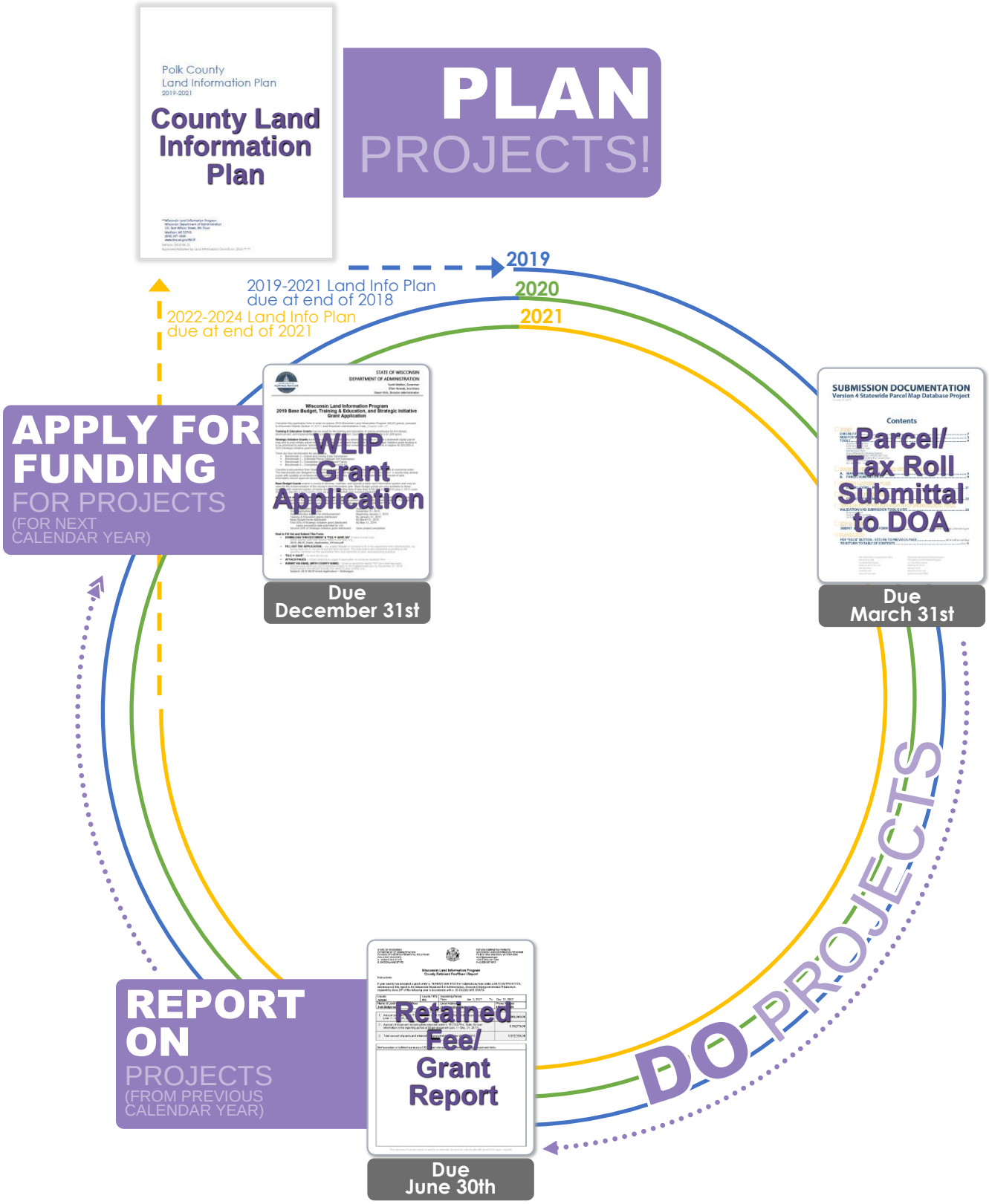


Figure 1. The WLIP Land Information Plan/Grant Project Cycle

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

Project Description/Goal

How Searchable Format Will Be Maintained

- Polk County follows closely the Submission Documentation that is prepared each year by the Wisconsin State Cartographer's Office and the Wisconsin Department of Administration for the Statewide Parcel Map Database Project.
- The County has standardized its tax roll data entry methods which have helped eliminate data cleanup. Tax roll entry methods are managed by the Treasurer's Office and the Land Information Office.
- The County also has standardized its parcel geometry methods to match the searchable format to help eliminate annual data cleanup. Parcel geometries are managed by the Land Information Office.
- The County Information Technology Office has setup a tax roll extraction process that is effectively formatted to the searchable standard. Some hands-on manipulation and cleanup of the tax roll and the extraction file are needed to comply with the searchable standard.
- The County does perform all data cleanup and standardization tasks in order to meet the Searchable Format standard before submitting call for data.
- **Land Info Spending Category:** Administrative Activities and Management

Business Drivers

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

Objectives/Measure of Success

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

Project Timeframes

Timeline – Project Plan to Maintain Searchable Format

Milestone	Duration	Date
Project start	–	January 1, 2019
Gather & format data	2 months	January-February 2019
Project complete	–	March 1, 2019
Project start	–	January 1, 2020
Gather & format data	2 months	January-February 2020
Project complete	–	March 1, 2020
Project start	–	January 1, 2021
Gather & format data	2 months	January-February 2021
Project complete	–	March 1, 2021

Responsible Parties

- Department of Land Information, Division of GIS: GIS Coordinator
- Department of Land Information, Division of Surveyor: County Surveyor, Survey/Mapping Technician, Real Property Lister / Analyst

Estimated Budget Information

- $29,127. Also see table at the end of this chapter for project budget information.

Project #1: Produce new hydrographic layers per the 2015 LiDAR derivatives

Project Description/Goal

- In conjunction with LiDAR deliverables, Esri's Spatial Analyst tools, Wisconsin DNR Ordinary High Water Mark (OHWM) elevation records, and orthophotography Polk County will be determining OHWM on navigable bodies of water. From the established OHWM the County plans to create a new hydrographic layer. This new layer will be used by zoning for all new land use ordinance maps, along with enhancing parcel geometries.
- **Land Info Spending Category:** Other (also affects Parcel Mapping)

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity.*
- Comprehensive update to a Foundational Element layer.
- Improved horizontal accuracy and geographic location of the Ordinary High Water Mark of water bodies.
- Riparian owners in Polk County will see a more accurate acreage interpretation and frontage data per parcel mapping adjustments.
- Provide a higher level of general purpose zoning district accuracy and locations.
- Departments affected: Land Information and Treasurer.

Objectives/Measure of Success

- Completion of hydrographic layers including OHWM and river/stream centerlines.
- Completion of parcel geometry adjustments to the new hydrographic layers.
- All data viewable on the County mapping website.

Project Timeframes

- The hydrographic layers will be completed as time allows

Timeline – Project #1 Produce new hydrographic layers per the 2015 LiDAR derivatives

Milestone	Duration	Date
Project #1 start	–	September 1, 2019
Bodies of water	7 months	April 30, 2020
River/Stream centerlines	7 months	Nov 30, 2020
Project complete	–	Dec 31, 2020

Responsible Parties

- Department of Land Information, Division of GIS: GIS Coordinator (90%)
- Department of Land Information, Division of Surveyor: Polk County Surveyor and Survey/Mapping Technician (10%, elevation gathering)

Estimated Budget Information

- $121,414. Also see table at the end of this chapter for project budget information.

Project #2: Produce new general purpose zoning district layer per new hydrographic layers

Project Description/Goal

- Per the completion of Project #1 a new General Purpose Zoning District Layer will be produced based on the resulting hydrographic layers.
- **Land Info Spending Category:** Zoning

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity.*

- Comprehensive update to a Foundational Element layer.
- Improved horizontal accuracy and geographic location of the General Purpose Zoning District.
- To increase data reliability and efficiency for the Zoning staff.
- County business data lacks detailed location information, making it less useful.
- Better data clarity, efficiency, information, and services for the public.
- Departments affected: Land Information.

Objectives/Measure of Success

- Completion of a new general purpose zoning district map.
- When data is viewable on the County mapping website.

Project Timeframes

- The General Purpose Zoning District layer will be completed as time allows.

Timeline – Project #2 Produce new general purpose zoning district layer per new hydrographic layers		
Milestone	**Duration**	**Date**
Project #2 start	–	Jan 1, 2021
Buffer hydrographic layers to produce new layer. Includes cleanup	15 days	Jan 15, 2021
Remove Wisconsin DNR wetlands from layer. Includes cleanup	1 month	Feb 15, 2021
Project complete	–	Feb 15, 2021

Responsible Parties

- Department of Land Information, Division of GIS: GIS Coordinator (100%)

Estimated Budget Information

- $8,058. Also see table at the end of this chapter for project budget information.

Project #3: PLSS monument maintenance, parcel mapping maintenance (including accuracy improvements), and tie sheet maintenance

Project Description/Goal

- Polk County has met statutory directive benchmarks 1-4 to create a statewide digital parcel map. The goal is to maintain the county parcel fabric, PLSS monuments, and tie sheets.
- **Land Info Spending Category:** PLSS (also affects Parcel Mapping)

Business Drivers

- *WLIP Base Budget Grant opportunity*.
- To continue to manage the PLSS and parcel mapping foundational elements that includes, staffing costs, GPS equipment, vehicle costs, survey monuments costs, surveying accessories, surveying tools, phone contract, and tie sheet maintenance.
- The PLSS infrastructure and parcel maps help facilitate administration, zoning, building and site development, flood control, lake and stream erosion control, and the planning, design and construction of roads and public works. In the private sector, the PLSS and parcel maps are useful to attorneys, appraisers, assessors, surveyors, engineers, and utility corporations as a means to inventory land holdings and index land records. Wisconsin State Cartographer's Office (SCO)
- Departments affected: Land Information

Objectives/Measure of Success

- All data is available on the Polk County website and to enhance 911 services.

Project Timeframes

- On going

Responsible Parties

- Department of Land Information, Division of Surveyor: Polk County Surveyor and Survey/Mapping Technician.

Estimated Budget Information

- $378,957. Also see table at the end of this chapter for project budget information.

Project #4: 2020 orthoimagery collection and delivery

Project Description/Goal

- Collect color and infra-red (free product) orthoimagery in the spring of 2020.
- **Land Info Spending Category:** Orthoimagery

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity*.
- Extend the Polk County aerial imagery collection that started in 1996.
- Improve, update, and manage county mapping services, analytic services, demographic services, zoning services, 911 services, assessment services, public services, and private services.
- Departments affected: Highway; Land Information; Land and Water Resources; Parks, Forestry, Buildings and Solid Waste; and Sheriff.

Objectives/Measure of Success

- Obtain color and infra-red orthoimagery tiles and mosaics.

Project Timeframes

Timeline – Project #4 2020 ortho imagery collection and delivery

Milestone	Duration	Date
Project #4 start Payment 1	–	April or May, 2020
Data deliverables	8-9 months	By end of 2020
Payment 2	1 year	April or May, 2021
Project complete Payment 3	2 years	April or May, 2022

Responsible Parties

- Department of Land Information, Division of GIS: GIS Coordinator (5%),
- Department of Land Information, Division of Surveyor: County Surveyor and Surveyor/Mapping Technician (5%)
- Contractor (90%)

Estimated Budget Information

- $99,510. Also see table at the end of this chapter for project budget information.

Project #5: Produce Comprehensive Planning maps

Project Description/Goal

- Data development, gathering, analysis, and production of maps that will be used in the County Comprehensive Plan.
- **Land Info Spending Category:** Land Use (also affects Other (data and maps found in each of the 10 Comprehensive Plan elements))

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity*.

- Comprehensive update to one Foundational Element layer.
- To update and adopt County Comprehensive Plan.
- According to s. 66.1001(2)(i), comprehensive plans must be updated no less than once every 10 years.

Objectives/Measure of Success

- Inclusion of maps into the County Comprehensive Plan.
- Adoption of County Comprehensive Plan.

Project Timeframes

Timeline – Project #5 Produce Comprehensive Planning maps		
Milestone	**Duration**	**Date**
Project #5 start	–	April 1, 2019
Project complete	4 months	August 31, 2019

Responsible Parties

- Department of Land Information, Division of GIS: GIS Coordinator (80%),
- Department of Land Information, Division of Planning: County Planner (20%)

Estimated Budget Information

- $5,825. Also see table at the end of this chapter for project budget information.

Project #6: Incorporate NG9-1-1 NENA or WLIA Technical Committee data model for the address point and street centerline layers

Project Description/Goal

- Migrate the current data model for the Address Points and Street Centerline Layers into the NENA Standard for NG9-1-1 GIS Data Model.
- **Land Info Spending Category:** Address Points (also affects Street Centerlines)

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity*.
- Comprehensive update to a couple of Foundational Element layers.
- Per NENA-STA-006.1-2018
- Promote the creation of complete, consistent, high quality GIS data for use within NG9-1-1 systems.
- Establish standardized GIS data provisioning requirements and structure for all users.
- Establish provisioning guidelines for GIS data needed to support existing E9-1-1 systems, while transitioning into NG9-1-1 systems.
- Enable validation of the 9-1-1 civic location information against the local 9-1-1 Authorities' GIS data using the Location Validation Function (LVF).
- Enable routing of the 9-1-1 call to the appropriate destination, using the local 9-1-1 Authorities' GIS data provisioned to the Emergency Call Routing Function (ECRF).
- Provide the data to determine the correct emergency responding agencies.
- Enable compatibility and interoperability between GIS datasets while standardizing consistent data elements for software.
- Implementing this model will help the County meet the WLIP recommendations for 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.
- Departments affected: Land Information, Sheriff, and Zoning

Objectives/Measure of Success

- Existing attributes have been uploaded into the new data model.
- New field attributes/standards have been populated.
- Once the NENA Next Generation 9-1-1 GIS Data Model framework has been incorporated into the New World Public Safety software from Tyler Technologies.

Project Timeframes

Timeline – Project #6 Incorporate NG9-1-1 NENA data model for the Address and Street Centerline Layers

Milestone	Duration	Date
Project #6 start	–	April 1, 2021
Migrate to new model	1 month	April 1– April 30 2021
Populate new fields attributes	8 months	May 1 – December 31, 2021
Projected completion	–	Dec 31, 2021

Responsible Parties

- Department of Land Information, Division of GIS: GIS Coordinator (100%)

Estimated Budget Information

- $72,817. Also see table at the end of this chapter for project budget information.

Project #7: ROD real estate document tract index scanning

Project Description/Goal

- Scan and index all Register of Deeds tract index books and have them available online.
- **Land Info Spending Category:** Parcel Mapping (also affects Other parcel work (ROD indexing)

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity.*
- This will allow title searches to work from their place of business. Working from their place of business requires them to use Laredo. For those businesses that currently have a Laredo subscription, it will increase their usage therefore increasing subscription plans and/or overage charges. This should also encourage those businesses without a Laredo subscription to considering starting one.
- This benefits title searchers with the ability to work from their place of business. County departments (who use Laredo free of charge) will no longer have to come to the ROD office to search the old tract indexes. This benefits the ROD office by a decrease in use of in-house equipment (computers and printers). As our public computer stations need repair and/or replacement, we should be able to decrease the number of stations provided for in-house searchers.
- Departments affected: Register of Deeds

Objectives/Measure of Success

- Objective is to have the entire tract index scanned and available online by May, 2019.

Project Timeframes

- No official timeline has been secured. May, 2019 is the preferred target completion date.

Responsible Parties

- US Imaging will be the third party in charge of this scanning project. They, in turn, will coordinate with Fidlar to integrate the images into the AVID/Laredo/Tapestry software programs.
- Department of Register of Deeds

Estimated Budget Information

- $13,047. Also see table at the end of this chapter for project budget information.

Project #8: Complete neighborhood/subdivision layer for geographic indexing of non-recorded documents by geography in GIS

Project Description/Goal

- Geographic Index of CSM, MOS, & Plat locations. Includes recorded document number, date recorded, and ROD envelope index. Non-recorded documents (such as map-of-surveys) will be geocoded to the feature by document number.
- Complete subdivision layer geometries.
- Insure/update MOS index attribute name and pdf file index name are compatable.
- To expand the use of document imaging and GIS to "geocode" documents to geography and make them available to the public via the Internet.
- **Land Info Spending Category:** Parcel Mapping (also affects, PLSS, and Other)

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity.*
- Increase efficiency and access to geocoded non-recorded Register of Deeds documents via the internet.
- Departments affected: Land Information

Objectives/Measure of Success

- Geographically indexed documents available on the county webmapping site

Project Timeframes

- As time allows or

Timeline – Project #8 Complete neighborhood/subdivision layer for geographic indexing of non-recorded documents by geography in GIS

Milestone	Duration	Date
Project #8 start	–	January 1, 2020
Project complete	2 months	February 29, 2020

Responsible Parties

- Department of Land Information, Division of Surveyor: Survey / Mapping Technician (90%)
- Department of Land Information, Division of GIS: GIS Coordinator (10%)

Estimated Budget Information

- $21,059. Also see table at the end of this chapter for project budget information.

Project #9: Complete zoning permit scanning for indexing of documents by geography in GIS

Project Description/Goal

- To expand the use of document imaging and GIS to "geocode" documents to geography and make them available to the public via the Internet.
- **Land Info Spending Category:** Parcel Mapping (also affects Other parcel work and Zoning)

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity.*
- Increase efficiency of Zoning Department with geocoded permits.
- Increase access for businesses and the public that are in need of such information.
- County business data lacks detailed location information, making it less useful.
- Departments affected: Land Information

Objectives/Measure of Success

- Permits 100% geocoded
- Geographically indexed available on the county webmapping site

Project Timeframes

- As time allows or

Timeline – Project #9 Complete zoning permit scanning for indexing of documents by geography in GIS		
Milestone	**Duration**	**Date**
Project #9 start	–	January 1, 2019
Index of zoning permits	–	–
Project complete	4 years	Dec 31, 2022

Responsible Parties

- Zoning Technician / Administrator Assistant (90%), GIS Coordinator (10%)

Estimated Budget Information

- $28,971. Also see table at the end of this chapter for project budget information.

Project #10: Migrate all GIS datasets over to the Esri local government data model or NG9-1-1 data model

Project Description/Goal

- To migrate all current county GIS dataset models over to the Esri local government data model or the NG9-1-1 data model in order to meet national standards. The goal is to insure compatibility, management, design, and deployment of Geographic Information Systems.
- **Land Info Spending Category:** Other (also affects Parcel Mapping)

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity*.
- Comprehensive update to multiple Foundational Element layers.
- Implementing these models will help the County meet the WLIP recommendations for 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.
- The Local Government Information Model can be used to organize your geographic information and deploy many of the ArcGIS for Local Government maps and apps. It is a harmonized information model of GIS datasets designed to support the data management and analysis maps and apps deployed with an ArcGIS geodatabase. *Esri*
- Migration of key GIS datasets that were traditionally modeled for the Enhanced 9-1-1 (E9-1-1) system, into the NENA Next Generation 9-1-1 (NG9-1-1) Core Services (NGCS) of location validation and routing, both geospatial call routing or to the appropriate agency for dispatch. This model also defines several GIS data layers (layers) used in local Public Safety Answering Point (PSAP) and response agency mapping applications for handling and responding to 9-1-1 calls.
    - Enables the validation of civic locations a 9-1-1 call is made.
    - Provides the data structure that allows the NG9-1-1 functionality that routes calls to the correct destination.
    - Maintains or improves support for accurate plotting of 9-1-1 calls in public safety mapping applications for call handling purposes.
    - Streamlines data maintenance.
    - Enhances interoperability and data sharing.
    - Reduces confusion and ambiguity that can result from understanding data *NENA NG9-1-1 GIS Data Model*

- Departments affected: Highway; Land Information; Land and Water Resources; Parks, Forestry, Buildings and Solid Waste; Sheriff's

Objectives/Measure of Success

- Once the data has been converted and managed in the new national standard. The new standard will set the foundation for future land records projects.
    - The information model includes a series of essential foundation layers and operational information that support a range of key maps and apps within a local government. Its design reflects specific application requirements and the cartographic design elements necessary to produce rich, multi-scale basemaps and operational layers.
    - The maps and apps provided in each ArcGIS for Local Government module are built on this harmonized information model. ArcGIS can be configured to support specific business needs in the County by selecting and implementing specific themes that are part of this integrated information model.
    - Another goal of the common information model is that maps and apps developed by one organization can be adopted and applied by others – increasing collaboration and minimizing redundancy. There are possibly hundreds of apps within local government, and collaboration will be needed for us to work together to meet these needs. *Esri Local Government Information Model*
- Once the NENA Next Generation 9-1-1 GIS Data Model framework has been incorporated into the New World Public Safety software from Tyler Technologies.
- New field attributes/standards have been populated.

Project Timeframes

- April 1, 2020 - As time allows - Likely multiple years

Responsible Parties

- Department of Land Information, Division of GIS: GIS Coordinator (100%)

Estimated Budget Information

- $48,545. Also see table at the end of this chapter for project budget information.

Project #11: Implementation of a permit management software for land use and POWTS permits

Project Description/Goal

- Implementation of the Ascent-Permit Management Suite consists of products used for the tracking and maintenance of both sanitary and land use permits within the County. This suite of products provides automation of the workflow process of permit application, creation, inspection, and maintenance of various permit types. *Transcendent Technologies*
- **Land Info Spending Category:** Software (also affects Website Development/Hosting Services)

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity.*
- "Land Use Permits" is an inventory and tracking database application for all land use permits issued by the County. The application stores all pertinent information from the permit, tracks activities associates with the permit, and also provides integration points with the County's parcel management system. Various online queries and reports automate the workflow associated with the lifecycle of the land use permit. The integration with other systems in the county greatly reduces the amount of data that needs to be maintained, and provides a seamless interface to applications such as the County's GIS. *Transcendent Technologies*
- "POWTS Permits" This is an inventory and maintenance database for private on-site wastewater treatment systems. The application stores all pertinent information from the sanitary permit application, scanned images of the plan itself, and also provides integration points with the County's parcel management system. This innovative system automates the maintenance of these

systems by automatically generating notices and providing a web portal for the pumpers to easily enter pumping information. This reduces the amount of time the County spends entering these reports into the system manually. *Transcendent Technologies*
- Departments affected: Land Information

Objectives/Measure of Success
- Migration of county records to the suite.
- Online records access.
- Product training and workflow processes implemented.

Project Timeframes
- Completion by end of 2019.

Responsible Parties
- Transcendent Technologies
- Department of Land Information, Division of Zoning: Zoning Administrator

Estimated Budget Information
- $52,500. Also see table at the end of this chapter for project budget information.

Project #12: GIS website hosting services and software maintenance

Project Description/Goal
- To insure the resources to manage and publish land records are modern.
- **Land Info Spending Category:** Software (also affects Website Development/Hosting Services)

Business Drivers
- *WLIP Base Budget Grant opportunity*.
- For keeping current on land records software products used by staff. Includes technical support, e-learning, beta priority and promos, user conference access, platform access, and news releases and software updates.
- For managing land records online.
- The policy of Polk County is to develop, implement, and maintain a modern countywide geographic information system (GIS) that is horizontally and vertically integrated; a GIS that provides useful quality data for its citizens, agencies, businesses, and other users of land information in an equitable and efficient manner. It is desirable to access this information through a public access terminals and the Internet to display this data in a user-friendly format.
- The objectives of the County are to: decentralize land records access; implement controls for dispersing land information; build a framework that supports parcel level activity; improve land records accuracy; maintain security and confidentiality where needed; minimize costs; reduce duplication; promote compatibility; increase efficiency and make land information readily available to users.
- Departments affected: Highway; Land Information; Land and Water Resources; Parks, Forestry, Buildings and Solid Waste; Sheriff's.

Objectives/Measure of Success
- Annual contracts have been fulfilled.

Project Timeframes
- On going

Responsible Parties
- Applied Data Consultants
- Esri Inc
- Department of Land Information, Division of GIS: GIS Coordinator

Estimated Budget Information
- $34,050. Also see table at the end of this chapter for project budget information.

Project #13: Land Records Management software hosting and maintenance services

Project Description/Goal

- To insure the resources to manage and publish land records are modern.
- **Land Info Spending Category:** Software (also affects Website Development/Hosting Services)

Business Drivers

- *WLIP Base Budget Grant opportunity*.
- For keeping current on land records software products used by staff. Includes framework, technology, design, support, automation, and updates.
- For managing land records online.
- The policy of Polk County is to develop, implement, and maintain a modern countywide geographic information system (GIS) that is horizontally and vertically integrated; a GIS that provides useful quality data for its citizens, agencies, businesses, and other users of land information in an equitable and efficient manner. It is desirable to access this information through a public access terminals and the Internet to display this data in a user-friendly format.
- The objectives of the County are to: decentralize land records access; implement controls for dispersing land information; build a framework that supports parcel level activity; improve land records accuracy; maintain security and confidentiality where needed; minimize costs; reduce duplication; promote compatibility; increase efficiency and make land information readily available to users.
- Departments affected: Land Information and Treasurer

Objectives/Measure of Success

- Annual contracts have been fulfilled.

Project Timeframes

- On going

Responsible Parties

- GCS software Land Records Management
- Department of Land Information and Treasurer

Estimated Budget Information

- $50,670. Also see table at the end of this chapter for project budget information.

Project #14: Register of Deeds Document indexing maintenance services

Project Description/Goal

- To insure the resources to manage and publish land records are modern.
- **Land Info Spending Category:** Other parcel work (also affects Software and Website Development/Hosting Services)

Business Drivers

- *WLIP Base Budget Grant opportunity*.
- For keeping current on land records software products used by staff.
- For managing land records online.
- The policy of Polk County is to develop, implement, and maintain a modern countywide geographic information system (GIS) that is horizontally and vertically integrated; a GIS that provides useful quality data for its citizens, agencies, businesses, and other users of land information in an equitable and efficient manner. It is desirable to access this information through a public access terminals and the Internet to display this data in a user-friendly format.

- The objectives of the County are to: decentralize land records access; implement controls for dispersing land information; build a framework that supports parcel level activity; improve land records accuracy; maintain security and confidentiality where needed; minimize costs; reduce duplication; promote compatibility; increase efficiency and make land information readily available to users.
- Departments affected: Register of Deeds and Land Information

Objectives/Measure of Success

- Annual contracts have been fulfilled

Project Timeframes

- On going

Responsible Parties

- Fidlar Technologies
- Department of Register of Deeds

Estimated Budget Information

- $72,750. Also see table at the end of this chapter for project budget information.

Project #15: Back index Grantor/Grantee image index prior to mid-1995 and legal description

Project Description/Goal

- Back indexing, using the Avid Fidler Technologies product, of the Grantor/Grantee image/paper index prior to mid-1995 and have the information available online.
- **Land Info Spending Category:** Parcel Mapping (also affects Other parcel work (ROD indexing)

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity.*
- This will allow easier searching from remote stations, therefore increasing Laredo subscriptions and Laredo minute usage for existing subscribers. This will also increase the ability of the general public to do on-line searching using Tapestry, which will also generate revenue.
- This benefits title searchers with the ability to work from their place of business. Polk County departments (who use Laredo free of charge) will no longer have to come to the ROD office to view/print older documents. This benefits the ROD office by a decrease in use of in-house equipment (computers and printers). As our public computer stations need repair and/or replacement, we should be able to decrease the number of stations provided for in-house searchers. This also benefits the general public using Tapestry.
- Departments affected: Register of Deeds

Objectives/Measure of Success

- When back indexing of images is completed a minimum of 30 years.
- Grantor/Grantee information available online.

Project Timeframes

- Three years

Responsible Parties

- Department of Register of Deeds

Estimated Budget Information

- $87,750. Also see table at the end of this chapter for project budget information.
- Temporary budget needed for one full-time position, based on $15.00 per hour.

Project #16: Web Server Replacement

Project Description/Goal

- Replace aging information technology physical web server hardware with modern technology and compatibility hardware. This upgrade will allow the county to implement and support Ascent-Permit Management Suite services.
- **Land Info Spending Category:** Hardware (also affects Website Development/Hosting Services)

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity.*
- Continue to manage:
    - EmailGateway – Used along with the Exchange e-mail server.
    - PCAUTH – This is used for 2nd factor authentication for employees working remotely.
    - PCAVID – Used by Register of Deeds (Fidlar software).
    - PCREMOTE – Used along with PCAUTH for 2nd factor authentication.
    - WWW2 – Webserver used for FTP services for many departments, Land Information - Surveyor database/Recreation Viewer/GIS data, and GCS Tax information.
- Begin to manage: Ascent-Permit Management Suite services.
- Departments affected: All County Departments with an extra emphasis for the Information Technology, Land Information, Register of Deeds, and Treasurer Departments.

Objectives/Measure of Success

- Server installed and running
- Ascent-Permit Management Suite services are running.

Project Timeframes

- November 2018 – Early 2019

Responsible Parties

- Department of Information Technology

Estimated Budget Information

- $4,500. Also see table at the end of this chapter for project budget information.

Project #17: Implement Monarch/GCS Integration Product

Project Description/Goal

- Implement the Monarch product from Fidlar Technologies that extracts property owner information from the Avid land records management softeware and integrates the information directly into the GCS tax records system.
- This product will eliminate duplicate data entry between the Land Information Office and Register of Deeds Office and increase data compatibility, integrity, and search ability across departments.
- **Land Info Spending Category:** Software

Business Drivers

- *WLIP Strategic Initiative Grant or Base Budget Grant opportunity.*
- Increase workflow processing for the Land Information office by importing property information from the Avid land records management software into the GCS tax roll database.
- Reduce redundant data entry across departments.
- Department affected: Department of Land Information and Department of Register of Deeds.

Objectives/Measure of Success

- Integration tool is implemented.

Project Timeframes

- November 2018 – Early 2019

Responsible Parties

- Department of Land Information

Estimated Budget Information

- $5,000. Also see table at the end of this chapter for project budget information.

Completed Projects

- 100% PLSS remonumentation with survey grade GPS coordinates (2017).
- 100% Parcel map completion (2017).
- LiDAR collection completed (WROC 2015) and data deliverable obtained (2016).

Estimated Budget Information (All Projects)

Estimated Budget Information

Project Title	Item	Unit Cost/Cost	Land Info Plan Citations Page # or section ref.	Project Total
Project plan to maintain searchable format (benchmarks 1 & 2)	GIS Coordinator	10% of 97,090 = 9,709 (x3 years) = 29,127	Page 34	**29,127**
1) Produce new hydrographic layers per the 2015 LiDAR derivatives	GIS Coordinator	117% of $97,090 = 113,595	Page 35	–
	Survey/Mapping Technician	10% of $78,188 = 7,819		–
				121,414
2) Produce new general purpose zoning district layer per new hydrographic layers	GIS Coordinator	8.3% of $97,090 = 8,058	Page 35	**8,058**
3) PLSS monument maintenance, parcel mapping maintenance, (including accuracy improvements), and tie sheet maintenance	County Surveyor	50% of $104,810 = 52,405 (x3 years) = 157,215	Page 36	–
	Survey/Mapping Technician	75% of $78,188 = 58,641 (x3 years) = 175,923		–
	GPS equipment 10 year replacement cost	5,823 (x3 years) = 17,469		–
	Survey vehicle mileage	8,000 (x3 years) = 24,000		–
	-Survey monuments -Surveying accessories -Surveying tools	1,030 (x3 years) = 3,090		–
	Phone contract	420 (x3 years) = 1,260		–
				378,957
4) 2020 orthoimagery collection and delivery	Orthoimagery from Ayres Associates	County-wide 4-band orthos, 6" resolution, 76,560	Page 37	–
		St Croix Falls, Osceola, & Amery 4-band orthos, 3" resolution, 22,950		–
		33,170 (x3 years) = 99,510		**99,510**
5) Produce Comprehensive Planning maps	GIS Coordinator	6% of $97,090 = 5,825	Page 37	**5,825**
6) Incorporate NG9-1-1 NENA or WLIA Technical Committee data model for the address point and street centerline layers	GIS Coordinator	75% of $97,090 = 72,817	Page 38	**72,817**
7) ROD real estate document tract index scanning	Document scanning contractor from US Imaging	13,047	Page 39	**13,047**
8) Complete	Survey/Mapping	17% of 78,188 = 13,292	Page 40	–

neighborhood/subdivision layer for geographic indexing of non-recorded documents by geography in GIS	Technician			
	GIS Coordinator	8% of 97,090 = 7,767		–
				21,059
9) Complete zoning permit scanning for indexing of documents by geography in GIS	Zoning Technician/ Administrator Assistant	13% of 74,283 = 9,657 (x3 years) = 28,971	Page 40	**28,971**
10) Migrate all GIS datasets over to the Esri local government data model or NG9-1-1 data model	GIS Coordinator	50% of 97,090 = 48,545	Page 41	**48,545**
11) Implementation of a permit management software for land use and POWTS permits	Permit Management contractor from Transcendent Technologies		Page 42	–
	Land Use Permit Management Software	10,000		–
	Sanitary Permit Management Software	12,000		–
	Data migration and implementation services	19,500		–
	Annual Maintenance	5,500 (x2 years) = 11,000		–
				52,500
12) GIS website hosting services and software maintenance	GIS website hosting contractor from Applied Data Consultants	3,150 (x3 years) = 9,450	Page 43	–
	GIS software contractor from Esri Inc.	8,200 (x3 years) = 24,600		–
				34,050
13) Land Records Management software hosting and maintenance services	Contractor from GCS software, Inc.		Page 44	–
	Automatic and Posting of Property Tax Payments from GCS Municipal Collections	360 (x3 years) = 1,080		–
	Property Assessment/Tax Calculation & Billing – Real & Personal Property	5,250 (x3 years) = 15,750		–
	Tax Collections – Real & Personal Property	4,750 (x3 years) = 14,250		–
	Valuation Exchange Process – Export & Import	650 (x3 years) = 1,950		–
	Web Portal for Land Records Information	1,970 (x3 years) = 5,910		–
	On-line Property Tax Payment Service	500 (x3 years) = 1,500		–
	Appraisal Data Import Process	910 (x3 years) = 2,730		–
	LandNav	2,500 (x3 years) = 7,500		–
				50,670
14) Register of Deeds document	Contractor from Fidlar	24,250 (x3 years) =	Page 44	**72,750**

	indexing maintenance services	Technologies	72,750		
15)	**Back index Grantor/Grantee image index prior to mid-1995 and legal description**	Register of Deeds Staff	29,250 (x3 years) = 87,750	Page 45	**87,750**
16)	**Web Server Replacement**	Contractor from Connecting Point Computer Centers	4,500	Page 46	**4,500**
17)	**Implement Monarch/GCS Integration Product**	Contractor from Fidlar Technologies	5,000	Page 46	**5,000**
				GRAND TOTAL	**1,134,550**

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

5 APPENDIX

Land Information Council Approval

Polk County Land Information Department

Zoning | Planning | Mapping | Surveyor

100 Polk County Plaza, Suite 130
Balsam Lake, WI 54810

Phone (715) 485-9279
Fax (715) 485-9246

Steve Geiger, Interim Director

AGENDA/MINUTES
Polk County Land Information Council
East Conference Room 9:00-10:00 AM
September 11, 2018

Meeting called to order by Interim Land Information Officer Steve Geiger at 9:04 a.m.

Members Present:
Steve Geiger, Sally Spanel, Amanda Nissen, Paula Fedder, Kim O'Connel, Kathy Poirier, Tim Anderson, Jason Kjeseth, Brad Runeberg, Todd Demers, Mark Gossman, Debbie Peterson, and Tim Ritten

Members Absent:
Tim Hartmann and Jill Stoffel

1. Introductions
2. Background Wisconsin Land Information Program
3. Polk County Land Information Plan 2019-2021
4. 2019 Base Budget, Training and Education, and Strategic Initiative Grant Application
5. Questions and Comments
6. Future possible program projects
7. Motion to approve plan with or without changes
   - Motion by Debbie Peterson to approve the Polk County Land Information Plan 2019-2021 as presented. Second by Sally Spanel. Motion carried
8. Adjourn
   - Motion by Tim Anderson to adjourn. Seconded by Amanda Nissen. Motion carried. Adjourned at 10:20 a.m.