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Kewaunee 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 Kewaunee County prepared by the land information officer (LIO) and the Kewaunee 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 2018, Kewaunee County was awarded \$121,360 in WLIP grants and retained a total of \$29,640 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 Kewaunee County’s budget is 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 Kewaunee County. Land information is central to county operations, as many essential services rely on accurate and up-to-date geospatial data and land records. A countywide land information system supports economic development, emergency planning and response, and a host of other citizen services. The Kewaunee 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 Kewaunee County Land Information Office. In the next three years, Kewaunee County’s Land Information Office strives to be recognized for its exceptional web mapping site, gains in governmental efficiencies by broadening the utilization of GIS, improving communication between databases and software packages in different county departments, and responsiveness to meeting the land records needs of residents and businesses.

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

Kewaunee County Land Information Projects: 2019-2021	
Project #1	Parcel Map maintenance
Project #2	GIS website hosting
Project #3	ESRI & GCS software maintenance
Project #4	Register of Deeds Scanning projects & part-time assistant
Project #5	Collection of GIS bedrock data via probing projects
Project #6	Orthophoto projects in 2019 & 2021

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

Kewaunee County Land Information System History and Context

The Kewaunee County Land Information Program, as we know it today, officially began in 1989. That was when the county started to use Register of Deeds recording fees to develop an organized remonumentation program. Baudhuin Incorporated, from Sturgeon Bay, had been doing "spot" remonumentation up to that point for local surveyors as they made requests. However, we had never before collected any GPS coordinates for the monuments that were set as a result of those requests.

In 1990 we started working with Ruckert & Mielke, Inc. as our GIS consulting firm. They guided us in our land records decision-making and did all of the county's GIS work for the next 6 years. In 1996 Kewaunee County had an employee in its Land & Water Conservation Department who started working part-time as the county's GIS Coordinator. This arrangement was in place for 10 years. In 2006 Kewaunee County created a Land Information Director position and consolidated the real property listing, GIS, LIO Officer, and land records departments into the Kewaunee County Land Information Office. This is still the structure that we have in place today.

Kewaunee County's first digital parcel map was started in 1992 by Ruckert & Mielke, and it was completed in 2000. We also did our first orthophoto flight in 2000 - a black and white, 1 foot resolution photo that was flown by Aero-metric for approximately \$50,000. Our parcel map maintenance was done by Ruckert & Mielke until 2006 when the land information director began doing parcel map maintenance in-house.

In 2004 and 2005 Kewaunee County completed the remonumentation of two of its townships and snapped the parcel lines to those monuments. From 2006 through 2014 we made a concerted effort to finish up the remainder of our remonumentation work. We did that in 2014. In 2015 we started snapping parcel lines to these recently acquired monument locations in our 8 remaining townships. We finished snapping parcel lines to our monuments in 2017.

Since our original orthophoto project in 2000 we have done additional orthophoto projects in 2005, 2010, and again in 2015. We have also done two oblique imagery flights - one in 2009 and one in 2014. In 2012 we completed the most expensive project that we have undertaken to date - our county-wide LIDAR project.

The data from all of our "biggest" projects, which are mentioned above, along with a multitude of other GIS data layers and land records information can be found on our land records portal by going to www.kewauneeco.org and then clicking on Land Records on the left hand side.

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

Kewaunee County Land Information Council and Plan Workgroup				
Name	Title	Affiliation	Email	Phone
+Germaine Bertrand	Register of Deeds	Kewaunee County	Bertrand.germaine@kewaunee.co.org	920-388-7126
+Michelle Dax	County Treasurer	Kewaunee County	Dax.michelle@kewauneeco.org	920-388-7152
+Tammy Malach	Real Property Lister	Kewaunee County	Malach.tammy@kewauneeco.org	920-388-7130
+Robert Weidner	County Board Member	Kewaunee County	Weidner.robert@kewauneeco.org	920-845-5463
+Steve Hanson	Land Information Office Director	Kewaunee County	Hanson.steve@kewauneeco.org	920-388-7190
+Jack Novak	Realtor	Novak Agency Inc. Kewaunee, WI 54216	jnovak@novakagency.com	920-388-2890
+Chris VanErem	Public Safety Officer	Kewaunee County	Vanerem.chris@kewauneeco.org	920-388-7189
+Kip Inman	County Surveyor	Titletown Surveying LLC Allouez, WI 54301	kipinmants@att.net	920-336-7387
Scott Feldt	County Administrator	Kewaunee County	Feldt.scott@kewauneeco.org	920-388-7111
Ross Loining	IT Director	Kewaunee County	Loining.ross@kewauneeco.org	920-388-7186
Tracy Nollenberg	Emergency Management Director	Kewaunee County	Nollenberg.tracy@kewauneeco.org	920-845-9701
Matt Joski	Sheriff	Kewaunee County	Joski.matt@kewauneeco.org	920-388-3177
Todd Every	Highway Commissioner	Kewaunee County	Every.todd@kewauneeco.org	920-255-1800
Dave Myers	Parks & Promotion Director	Kewaunee County	Myers.dave@kewauneeco.org	920-255-1083
Brian Dax	Citizen Member	Lighthouse Title	bdax@lighthousegroup.net	920-388-2226
Davina Bonness	County Conservationist	Kewaunee County	Bonness.davina@kewauneeco.org	920-845-9700

+ Land Information Council Members designated by the plus symbol

2 FOUNDATIONAL ELEMENTS

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

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

FOUNDATIONAL ELEMENTS

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

PLSS

Public Land Survey System Monuments

Layer Status

PLSS Layer Status	Status/Comments
Number of PLSS corners (selection, ¼, meander) set in original government survey that can be remonumented in your county	• 1255
Number and percent of PLSS corners capable of being remonumented in your county that have been remonumented	• 1566 100%
Number and percent of remonumented PLSS corners with survey grade coordinates (see below for definition) <ul style="list-style-type: none"> • SURVEY GRADE – coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision • SUB-METER – point precision of 1 meter or better • APPROXIMATE – point precision within 5 meters or coordinates derived from public records or other relevant information 	• 1566 100%
Number and percent of survey grade PLSS corners integrated into county digital parcel layer	• 1566 100%
Number and percent of non-survey grade PLSS corners integrated into county digital parcel layer	• 0%
Tie sheets available online?	• Yes. Available on land records portal and SCO control finder.
Percentage of remonumented PLSS corners that have tie sheets available online (whether or not they have corresponding coordinate values)	• 100%
Percentage of remonumented PLSS corners that have tie sheets available online (whether or not they have corresponding coordinate values) and a corresponding URL path/hyperlink value in the PLSS geodatabase	• 100%
PLSS corners believed to be remonumented based on filed tie-sheets or surveys, but do not have coordinate values	• 0
Approximate number of PLSS corners believed to be lost or obliterated	• 117 (only physically lost)
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)?	• Our county surveyor created a unique corner point id system. It is deciphered in the attribute table of our PLSS layer.
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	• 110
Number and percent of PLSS corners remonumented along each county boundary	• 110 100%
Number and percent of remonumented PLSS corners along each county boundary with survey grade coordinates	• 110 100%
In what ways does your county collaborate with or plan to collaborate with neighboring counties for PLSS updates on shared county borders?	• Tie sheets are sent to bordering counties when updates are made.

Custodian

- LIO and Contracted County Surveyor

Maintenance

- Contracted County Surveyor

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

Other Geodetic Control and Control Networks

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

Layer Status

- Kewaunee County does not keep its HARN in-house. Rather, Ayres has it, and uses it whenever they do a WROC flight for us. A new HARN will be developed for us this year as part of a non-WROC ortho flight that we will be having Pictometry do for us.

Parcel Mapping

Parcel Geometries

Layer Status

- **Progress toward completion/maintenance phase:** County-wide parcel layer is completed and is in the maintenance phase in Kewaunee County, 100% of the county's parcels are available in a commonly-used digital GIS format.
- **Projection and coordinate system:** Wisconsin State Plane Central coordinates, NAD 83, map units = feet
- **Integration of tax data with parcel polygons:** Kewaunee County does have a parcel polygon model that directly integrates tax/assessment data as parcel attributes. **However, we do not have a unique URL path for each parcel record.**
- **Esri Parcel Fabric/LGIM Data Model:** The county does not currently use, but may implement at some point in the future Esri's Parcel Fabric Data Model, and/or Esri's Local Government Information Model.
- **Online Parcel Viewer Software/App and Vendor name:** Geocortex Essentials HTML5 website developed according to our design specifications by Ruckert & Mielke, Inc.

Custodian

- LIO

Maintenance

- **Update Frequency/Cycle.** Parcel polygons are updated by the LIO within a day of document being recorded that changes a parcel boundary.

Standards

- **Data Dictionary:** Currently the alternate parcel number and local zoning classification are the only attributes in the base parcel layer. The alternate parcel number is used to join to tables generated by our GCS software. The web app joins to a table that is automatically generated overnight, every night, so parcel polygon boundaries and data associated with them is always current.

Assessment/Tax Roll Data

Layer Status

- **Progress toward completion/maintenance phase:** NA
- **Tax Roll Software/App and Vendor name:** Property Assessment module from GCS Software
- **Municipal Notes:** NA, Kewaunee County does all tax listing for villages and cities

Custodian

- Kewaunee County LIO & Treasurer's Office

Maintenance

- **Maintenance of the Searchable Format standard:** To maintain the Searchable Format standard, the county will continue to have Ruekert & Mielke convert our data into the searchable format standard on an annual basis and submit it on our behalf. GCS Software has also created an export routine which generates a file that we give to Ruekert & Mielke. Kewaunee County has an IT staff of one, and that person is a network person who has very limited knowledge of and experience working with databases. We rely on our technical consultants.
- **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

Non-Assessment/Tax Information Tied to Parcels

Sanitary System Permits

Layer Status

- Complete – we do not link to parcels by attribute, but by spatial location

Custodian

- Kewaunee County Zoning Office

Maintenance

- Kewaunee County Zoning Office

Standards

- Meets requirements specified by our county zoning office

ROD Real Estate Document Indexing and Imaging

Layer Status

- **Grantor/Grantee Index:** Indexing by grantors (sellers/vendors) and grantees (buyers/vendees) is complete.
- **Tract Index:** Complete except for Volume 86-215 of Records, Volume 1-74 of Deeds, Volume 2-8 of Miscellaneous, and Volume 1-13 of Probate. Our tract indexing is both PIN & PLSS based, and it encompasses the following document types: Warranty Deeds, Quit Claim Deeds, Transfer on Death Deeds, Land Contracts, Trustee's Deeds, Special Administrator's Deeds, Sheriff's Deeds, Guardian Deeds, Personal Representative Deeds, Tax Deeds, and Condominium Deeds.
- **Imaging:** Complete and we use TIFF images.

ROD Software/App and Vendor Name: Land Records Indexer by Deketo (based in MI)

Fee structure/subscription fees:

- - All customers must sign a contract and deposit \$100
- -To view the index there is no charge.
- -To see the document details the charge is .50 cents
- -To view and print a document is \$2 for the first page and \$1 for each additional page

Custodian

- County Register of Deeds

Maintenance

- ROD office staff

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:** 2012
- **Accuracy:** FVA = 0.788 feet RMSE = 0.459 feet
- **Post spacing:** 3.18 feet
- **Contractor's standard, etc.:** meets FEMA specs for high engineering analysis and 2 foot contour mapping
- **Next planned acquisition year:** None planned

Custodian

- LIO

Maintenance

- None planned

Orthoimagery

Orthoimagery

Layer Status

- **Most recent acquisition year:** 2015
- **Resolution:** 6 inch
- **Contractor's standard:** meets WROC specs for 6" color ortho
- **Next planned acquisition year:** 2019
- **WROC participation in 2020:** Will not participate. Decided to go with Eagle View's 6" accuplus color ortho flight in 2019 instead

Custodian

- LIO

Maintenance

- Next planned flight in 2019

Standards

- meets WROC specs for 6" color ortho

Historic Orthoimagery

Layer Status

- We have imagery for 1938, 2000, 2005, 2009, 2010, 2014, and 2015

Custodian

- LIO

Maintenance

- None

Standards

- Varies for each year

Other Types of Imagery

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

Layer Status

- Oblique flights in 2009 and 2014

Custodian

- LIO

Maintenance

- We may stop paying annual fee to make data available on our website

Standards

- Met Pictometry standards

Address Points and Street Centerlines

Address Point Data

Layer Status

- Complete

Custodian

- LIO

Maintenance

- County Zoning Department for rural addresses and cities and villages for urban addresses

Standards

- Rural addresses digitized on top of structures shown on aerial photography using web app we developed so accuracy is within 6 inches. City and village address points were determined using parcel polygon centroids so accuracy is dependent upon the polygon's size and shape.

Building Footprints

Layer Status

- No current layer

Other Types of Address Information

e.g., Address Ranges

Layer Status

- No current geocoding of road centerlines

Street Centerlines

Layer Status

- Complete

Custodian

- LIO

Maintenance

- As needed

Standards

- Originally digitized on top of roads shown on 2005 aerial photography

Rights of Way

Layer Status

- Complete

Custodian

- LIO

Maintenance

- As needed

Standards

- Originally created as part of our parcel mapping by Ruekert & Mielke

Trails

Layer Status

- In past we digitized snowmobile, atv, and mountain bike trails for Parks Department

Custodian

- LIO

Maintenance

- Have not been maintained

Standards

- GPS units were used to map so accuracy was no better than +/- 10-15 feet

Land Use

Current Land Use

Layer Status

- Complete

Custodian

- Baylake RPC

Maintenance

- Baylake RPC maintains this data for us

Standards

- Met standards of Baylake RPC for our comprehensive and farmland preservation plan updates

Future Land Use

Layer Status

- Complete

Custodian

- Baylake RPC

Maintenance

- Baylake RPC maintains this data for us

Standards

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

Zoning

County General Zoning

Layer Status

- Not administered by county.

Shoreland Zoning

Layer Status

- The County does maintain a GIS representation of county shoreland zoning boundaries, and we consider this layer to be complete. It was simply created by buffering the distances from streams and lakes, accordingly.

Custodian

- LIO

Maintenance

- None

Standards

- Dependent upon the accuracy of the DNR lake and stream layers

Farmland Preservation Zoning

Layer Status

- The County does maintain a GIS representation of county farmland preservation zoning boundaries. Complete.
- **Year of certification:** 2016. No, our layer is not updated to reflect re-zones. DATCP would not want this because they want to be able to tell how consistent the towns are with following the county's plan.

Custodian

- Baylake RPC

Maintenance

- Baylake RPC

Standards

- Same as our parcel layer which Baylake RPC uses for this layer

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.
- We do not make boundary adjustments, but we do have Letters of Map Change

Custodian

- LIO

Maintenance

- None

Standards

- Very poor quality due to digitizing from old paper maps

Administrative Boundaries

Civil Division Boundaries

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

Layer Status

- Complete.

Custodian

- LIO

Maintenance

- Updated whenever we have annexations.

Standards

- Same as parcel layer.

School Districts

Layer Status

- **Progress toward completion/maintenance phase:** Complete.
- **Relation to parcels:** Created from parcel layer.
 - **Attributes linked to parcels:** Attributes come from parcel layer.

Custodian

- LIO

Maintenance

- Can be recreated at any time from parcel layer.

Standards

- Same as parcel layer.

Election Boundaries

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

Layer Status

- Supervisory districts, voting wards, and aldermanic districts were created after the 2010 census.

Custodian

- LIO

Maintenance

- Will be updated after the 2020 census.

Standards

- Created from data included with the WISE-LR program.

Utility Districts

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

Layer Status

- We do not have any utility district layers.

Public Safety

Layer Status

- We have fire department and rescue squad boundary layers.

Custodian

- LIO

Maintenance

- Never had to update.

Standards

- Two of our original layers – not tied to any other layers.

Lake Districts

Layer Status

- We do not have any.

Native American Lands

Layer Status

- We do not have any.

Other Administrative Districts

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

Layer Status

- We do not have any.

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

- We do not have any.

Cell Phone Towers

Layer Status

- Have not been mapped yet. This is one of our potential future projects.

Bridges and Culverts

Layer Status

- Bridges not mapped. Culverts will be completed in 2018.

Custodian

- LIO

Maintenance

- LIO

Standards

- Ruekert & Mielke mapped according to their culvert mapping standards. Locations determined using survey grade GPS unit.

Other

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

Layer Status

- Sinkholes

Custodian

- LWCD

Maintenance

- LWCD

Standards

- Point locations for data in LWCD were determined using aerial photography

Layer Status

- Manure Storages

Custodian

- LWCD

Maintenance

- LWCD

Standards

- Point locations for data in LWCD were determined using aerial photography

Layer Status

- Well Inventory Layer

Custodian

- LIO

Maintenance

- None planned

Standards

- Point locations with well log info compiled by the WGNHS

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

Kewaunee County Parcel Data Workflow & Land Information System Diagram

See diagram on following page...

ROD

- records real estate documents
- sends RETR to state
- provides index and images via Deketo software

Municipalities

- provide assessed values via their contracted assessor
- provide local zoning data via the county's web app
- provide levy amounts via mill rate worksheet to the RPL

DOR

- Provides data needed for tax bill calculations such as:
- equalized values
 - apportionment percentages
 - average assessment ratios
 - school levy tax credit amounts
 - state aids amounts
 - lottery and first dollar credit bases
 - equalized value school tax rates

Land Information Office

The following roles have been consolidated into the LIO in Kewaunee County:

RPL - utilizes GCS software for property listing and tax bill calculations

GIS - all parcel mapping done in-house using ESRI ArcEditor software

Land Records - acts as database manager for all survey documents in the county as well as county planning director when dealing with administration of the county's land division ordinance

DNR

- provides MFL rates

Contracted County Surveyor

- provides PLSS data such as tie sheets, township CSSD's, and monument coordinates

County Zoning Office

- tracks sanitary permits with GCS software and assigns new property addresses
- maps sanitary permit and drain field locations with GIS web app

General Public & all other users

Access our land information data via our land records portal at:

<https://kewaunee.co.ags.ruekert-mielke.com/>

DOR

- gets SOA's, work rolls, assessment rolls, and tax rolls

DOA

- gets data for state-wide parcel layer

County Treasurer

- prints tax bills with GCS software after RPL calculates property taxes
- collects 2nd half of tax bill payments and enters information into GCS software



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

- Desktop Hardware. County Staff use Windows PCs to perform data entry and updates. These PCs receive regular updates and are replaced on an as-needed cycle.
- Enterprise Hardware. The County uses two Windows servers to host its GCS land records application, including one database server and one web server. These servers are maintained by the County's IT department and are replaced on an as-needed cycle.

Software

- Desktop Software. All PC's run Windows 7 or 10. GIS data is maintained and created using ArcGIS Desktop.
- Enterprise Software. All PC's run Windows Server 2008R2 or later. The County uses GCS as its land records system.

Website Development/Hosting

- Internal. Kewaunee County hosts its GCS land records portal internally. Hardware is maintained by the County, and GCS provides application support and maintenance.
- Kewaunee County contracts with Ruckert & Mielke to provide hosting of its enterprise geodatabase and web-based GIS applications. Additionally R&M hosts non-spatial applications supporting PLSS dossiers, CSSDs, and abstract searches. R&M maintains an Amazon EC2 hosting environment with virtual servers running Windows Server 2012 R2 or newer. Other software used to provide these services includes:
 - SQL Server 2014
 - ArcGIS Server Enterprise
 - Geocortex Essentials

Metadata and Data Dictionary Practices

Metadata Creation

- **Metadata creation and maintenance process:** Can be created by our consulting firm if needed. To be honest we have never seen much of a need for it so we no longer create or maintain it. We spent a lot of money to create metadata for our entire GIS data set several years ago, and we never had a single request for it.

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:** no, fields are automatically generated if needed

Metadata Policy

- **Metadata Policy:** see creation and maintenance process above

Municipal Data Integration Process

- Kewaunee County provides parcel mapping, real property listing, and tax roll data for its municipalities. No data integration processes exist.

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
https://maps.ags.ruekert-mielke.com/Html5Viewer/index.html?viewer=KewauneePublic	NONE	http://gcportal.kewauneeeco.org/GCSWebPortal/search.aspx	https://rod.kewauneeeco.org/landweb/landweb.d11/\$/

Single Landing Page/Portal for All Land Records Data

URL

<https://kewauneeeco.ags.ruekert-mielke.com/>

Data Sharing

Data Availability to Public

Data Sharing Policy

- Best summarized below in data sharing restrictions and government to government data sharing sections.

Open Records Compliance

- We will provide data to anyone requesting it, but not necessarily databases. Records in pdf format are freely given to anyone making an open records request.

Data Sharing Restrictions and Government-to-Government Data Sharing

Data Sharing Restrictions

- We share our GIS data with anyone requesting it. However, for most non-government entities there is a cost associated with acquiring some of our GIS data sets.

Government-to-Government Data Sharing

- We will freely share our GIS data with any government entity that is also willing to freely share their GIS data with us. However, there are government entities that we do charge because they charge us.

Training and Education

- County staff attend conferences where training is provided. We also have our consultants provide in-house training to us on occasion. The \$1,000 that we receive in DOA grant money along with our budgeted money for training and travel is used to cover our annual training expenses. With the development of our new HTML 5 GIS website we have actually been providing a fair amount of training ourselves to the public and users of our site. Most recently a presentation was given to the Door County Realtor's Association on how to best utilize our site for the work they do.

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.

Project #1: Parcel Map Maintenance

Project Description/Goal

- Part of our base budget grant money each year will continue to go toward the parcel map maintenance work done by the LIO Director.
- **Land Info Spending Category:** Digital Parcel Mapping

Business Drivers

- Needed to make sure that the parcel data provided on our website remains current

Objectives/Measure of Success

- Every parcel boundary change should be visible on our website within 2 days of being recorded

Project Timeframes

- Ongoing

Responsible Parties

- LIO Director (100%)

Estimated Budget Information

- See table at the end of this chapter.

Project #2: GIS website hosting

Project Description/Goal

- Part of our base budget grant money each year will continue to go to Ruekert_Mielke for the hosting of our GIS website
- **Land Info Spending Category:** Website Development/Hosting Services

Business Drivers

- Our website needs to be hosted because the hardware/software costs for us to host and maintain it would be prohibitive. Our users rely on our website for current data on a daily basis.

Objectives/Measure of Success

- Our current Geocortex website has been quite stable with very little downtime

Project Timeframes

- Ongoing

Responsible Parties

- Ruekert-Mielke

Estimated Budget Information

- See table at the end of this chapter.

Project #3: GCS Software Maintenance

Project Description/Goal

- We utilize GCS Software for Property Listing in the LIO, Permitting in the zoning office, and Collections in the treasurer's office. An annual maintenance fee is required for this critical component of our land information system, and we use base budget grant money to cover this fee.
- **Land Info Spending Category:** Software

Business Drivers

- Our land information system could not function without this software

Objectives/Measure of Success

- The fact that the data from these offices is integrated into one system/database and is used by all departments as well as our website

Project Timeframes

- Ongoing

Responsible Parties

- GCS software and Kewaunee County

Estimated Budget Information

- See table at the end of this chapter.

Project #4: ESRI software maintenance

Project Description/Goal

- We use annual base budget grant money to cover the annual maintenance fee for our ArcEditor software which is needed for parcel map maintenance
- **Land Info Spending Category:** Software

Business Drivers

- This software is needed for parcel map maintenance as well as all other GIS mapping done by the LIO Director.

Objectives/Measure of Success

- The fact that all of this GIS work continues to get done.

Project Timeframes

- Ongoing

Responsible Parties

- ESRI and Kewaunee County

Estimated Budget Information

- See table at the end of this chapter.

Project #5: Part-time Assistant in the Register of Deeds Office

Project Description/Goal

- To insure that critical functions in the ROD for integration with the LIO are maintained
- **Land Info Spending Category:** Administrative Activities and Management

Business Drivers

- Since losing a full-time staff person that was covered by levy money two years ago we have been using a small portion of our base budget grant money to cover critical work in the ROD that pertains to LIO functions. The link between the ROD and the LIO is dependent upon this work.

Objectives/Measure of Success

- The fact that the Register of Deeds data and documents will soon integrate seamlessly with our GCS software in the property listing office.

Project Timeframes

- Ongoing

Responsible Parties

- The ROD and the LIO Director

Estimated Budget Information

- See table at the end of this chapter.

Project #6: Register of Deeds scanning projects

Project Description/Goal

- To eventually have all paper documents in the Registered of Deeds office scanned and available in an electronic format. There are several document types in addition to deeds that still should be scanned to ultimately make their office “paperless”.
- **Land Info Spending Category:** Administrative Activities and Management

Business Drivers

- County Administration would like to cut down on the current amount of office space that is necessary to store all of these documents in a paper format.

Objectives/Measure of Success

- To ultimately move all paper documents out of the office space and into an archive area

Project Timeframes

- Ongoing

Responsible Parties

- The ROD and the vendors that are hired to do the work

Estimated Budget Information

- See table at the end of this chapter.

Project #7: Orthophoto projects

Project Description/Goal

- To fly new orthophoto flights every other year rather than on a 5 years schedule as we have always done in the past
- **Land Info Spending Category:** Orthoimagery

Business Drivers

- We have had several requests from the public and county departments for more current air photos than we’ve always provided in the past on our website. With prices for these air photos continuing to go down the land council decided to change our flight schedule from once every five years to once every two years.

Objectives/Measure of Success

- To have a new county-wide color air photo with 6” resolution on our website once every two years.

Project Timeframes

- Every other year beginning in 2019

Responsible Parties

- LIO and the vendor that is hired

Estimated Budget Information

- See table at the end of this chapter.

Project #8: Bedrock Probing Projects

Project Description/Goal

- To use bedrock probing to continue to gather depth to bedrock information in a GIS format
- **Land Info Spending Category:** Other (GIS data collection which is essential to help alleviate our local water quality issues)

Business Drivers

- The spreading of manure in Kewaunee County needs to be highly regulated due to our karst topography. With the recent passage of ordinances at both the state and local level this data is essential for the proper enforcement of these new ordinances.

Objectives/Measure of Success

- Whether or not our land and water conservation department has the tools it needs to enforce the ordinances that it is required to enforce.

Project Timeframes

- Ongoing until our LWCD no longer needs additional data

Responsible Parties

- LWCD staff and UWGB geology staff

Estimated Budget Information

- See table at the end of this chapter.

Project #9: Kewaunee City Cemetery Mapping

Project Description/Goal

- We received a request from the Kewaunee City Administrator to map the city cemetery
- **Land Info Spending Category:** Administrative Activities and Management

Business Drivers

- To have a digital version of the city's cemetery plots rather than old paper maps

Objectives/Measure of Success

- Project will be complete when old paper maps are no longer needed

Project Timeframes

- As time permits

Responsible Parties

- LIO Director or vendor that is hired

Estimated Budget Information

- See table at the end of this chapter.

Project #10: Tile Line Mapping

Project Description/Goal

- We are exploring and considering doing a countywide tile mapping project which will also aid our land and water conservation department with managing the runoff of liquid manure.
- **Land Info Spending Category:** Other (collection of GIS data for the LWCD)

Business Drivers

- Much of our surface water pollution in Kewaunee County is caused by liquid manure, and tile lines are often a conduit for liquid manure to get to our surface waters. Knowing where these are located will help with the management of liquid manure spreading on our cropland fields.

Objectives/Measure of Success

- When old paper tile line maps are all converted to a GIS digital format

Project Timeframes

- A preliminary feasibility study will determine this

Responsible Parties

- LWCD staff and/or a contracted vendor that is hired

Estimated Budget Information

- See table at the end of this chapter.

Project #11: Document Scanning in the LIO

Project Description/Goal

- The LIO currently has copies of all documents of conveyance from the ROD office as hard copy paper maps in file cabinets. Using the scanning software purchased with WLIP grant money a few years back we would like to scan these documents and get rid of these file cabinets.
- **Land Info Spending Category:** Administrative Activities and Management

Business Drivers

- To improve efficiency by having these documents in a digital format and also to create additional space in our office by getting rid of these file cabinets

Objectives/Measure of Success

- Project will be complete when old paper documents are no longer needed

Project Timeframes

- As time permits

Responsible Parties

- LIO Director or vendor that is hired

Estimated Budget Information

- See table at the end of this chapter.

Project #12: Easement Mapping

Project Description/Goal

- The real property listing office does not currently track or maintain maps of easements. When easement locations are needed a title search in the ROD office needs to be done. Mapping easements and adding document information to an attribute table would simplify our process and make us much more efficient.
- **Land Info Spending Category:** Administrative Activities and Management

Business Drivers

- To eliminate the need for title searches whenever the location of an easement needs to be known.

Objectives/Measure of Success

- When all easements on documents in the ROD office are mapped in a GIS format

Project Timeframes

- As time permits

Responsible Parties

- Ruekert-Mielke would be hired to do this work if and/or when this project is undertaken

Estimated Budget Information

- See table at the end of this chapter.

Project #13: Systematic Monument Maintenance

Project Description/Goal

- Our contracted county surveyor would like Kewaunee County to select a handful of monuments each year that have not been visited by the county surveyor in more than 30 years to have maintenance performed on them.
- **Land Info Spending Category:** Administrative Activities and Management

Business Drivers

- Although, we have survey grade coordinates for each of our PLSS monument locations, not all surveyors in the county have GPS equipment which enables them to locate monuments via GPS. Landowners often use monuments set by the county, too, when trying to locate their property boundaries. Maintaining the physical monument along with witness monuments in the field still does have benefits even with the completion of our remonumentation project.

Objectives/Measure of Success

- Project will be never be complete, but hopefully we can always maintain physical monuments at each PLSS corner location and never have to rely only on GPS coordinates.

Project Timeframes

- As time permits

Responsible Parties

- Contracted county surveyor

Estimated Budget Information

- See table at the end of this chapter.

Project #14: Improve data speeds and/or install data fiber

Project Description/Goal

- Some of our county office locations are not able to utilize new land information technologies as efficiently as they would be able to if their data connection speeds were faster. Our IT Director has ideas for improvement in this area, and if land information funds are available in a particular year we would like to make those available for him to do some work on these projects.
- **Land Info Spending Category:** Administrative Activities and Management

Business Drivers

- The EOC, LWCD, and the highway department are not located in the administration building and their data connection to the administration building is slow. Although, it is fast enough to pull the license file for ArcEditor, it is too slow to pull some data layers such as orthophotos. Our GIS website works fine in these offsite locations, but all GIS data needs to be stored locally in order to use ArcMap and/or ArcEditor software.

Objectives/Measure of Success

- When ESRI software works as well at these offsite locations as it does in the administration building.

Project Timeframes

- As time and money permit

Responsible Parties

- IT Director

Estimated Budget Information

- See table at the end of this chapter.

Project #15: GIS Consulting Services

Project Description/Goal

- With only one Kewaunee County staff person designated as being responsible for GIS in the county we have always contracted with Ruekert-Mielke to provide the technical services that we are not able to do ourselves. We allocate approximately \$12,000 of our retained fees each year for these services.
- **Land Info Spending Category:** Administrative Activities and Management

Business Drivers

- Being a small county we are in constant need of the services provided by Ruekert-Mielke. The assistance they provide to us each year for the statewide parcel map initiative, PLSS formatting for the state cartographer's office, and day to day website issues that arrive due to volume of GIS apps they have created for us over the years is invaluable.

Objectives/Measure of Success

- Our land information system continues to function as smoothly as it has for the past several years now. Our website provides everything needed by our users. Fifteen years ago we had 4 in-house workstations that were constantly being utilized by our users. Our users very seldom have a need to stop in our office anymore.

Project Timeframes

- On an annual basis

Responsible Parties

- Ruekert-Mielke

Estimated Budget Information

- See table at the end of this chapter.

Project #16: Real Property Listing Functions in the LIO

Project Description/Goal

- Because real property listing is the backbone of our land information attribute data we allocate approximately \$13,000 of our retained fees each year to this critical function.
- **Land Info Spending Category:** Administrative Activities and Management

Business Drivers

- The attribute table that makes our GIS parcel layer useful is the result of real property listing in the county. All owner, address, assessment data, property tax data, etc. that is part of this table is the direct result of the work done by the real property lister. Along with parcel geometry and air photos, real property listing data is a primary component of our land information system.

Objectives/Measure of Success

- The fact that our real property listing data is kept current on a daily basis.

Project Timeframes

- Annual allocation for this work that is done daily

Responsible Parties

- Real Property Lister

Estimated Budget Information

- See table at the end of this chapter.

Estimated Budget Information

Project Title	Item	Unit Cost/Cost	Land Info Plan	Project Total
			Citations Page # or section ref.	
1) Parcel Map maintenance		30000/yr	Page 24	90000
2) GIS website hosting		9000/yr	Page 24	27000
3) GCS software maintenance		22000/yr	Page 24	66000
4) ESRI software maintenance		2000/yr	Page 25	6000
5) ROD assistant		8000/yr	Page 25	24000
6) ROD scanning projects		10000/yr	Page 26	30000
7) Orthophoto projects		25000/flight	Page 26	50000
8) Bedrock probing projects		5000/township	Page 26	20000
9) Cemetery mapping		10000/project	Page 27	10000
10) Tile line mapping		? Need to get estimate	Page 27	
11) LIO document scanning		10000/project	Page 28	10000
12) Easement mapping		? Need to get estimate	Page 28	
13) Monument maintenance		500/corner	Page 28	250000
14) Data speed improvement		? Need to get estimate	Page 29	
15) GIS consultant		12000/yr	Page 29	36000
16) Real property listing		13000/yr	Page 30	39000
GRAND TOTAL				658000

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



Kewaunee County Land Information Council

MEETING MINUTES

September 25, 2018

County Board Room, Kewaunee County Administration Center
810 Lincoln Street, Kewaunee, WI 54216

The meeting of the Kewaunee County Land Information Council was called to order by Land Information Office Director Steve Hanson on September 25, 2018, at 10:01 a.m. Members present included: Michelle Dax, Tracy Nollenberg, Davina Bonness, Germaine Bertrand, Robert Weidner, Ross Loining, Matt Joski, and Tammy Malach.

Steve Hanson updated the Council on the Land Records Modernization Plan Chapters 1-3. Chapters 1-3 have been completed and pre-approved by the DOA.

The Council reviewed the 2019 Grant Eligibility Table.

The Council reviewed the proposed 2019 Base Budget Grant expenditures. It was proposed that the \$72,816 grant be applied as follows: \$5,560 for the Register of Deeds' part-time assistant position; \$22,000 for GCS software maintenance for assessment, collections, and permit tracking; \$2,000 for ESRI maintenance; \$9,000 for hosting the HTML 5 GIS website; and \$30,000 towards the LIO Director's salary for parcel mapping.

A motion was made by Joski to approve the proposed 2019 LIO Base Budget Grant Expenditures as stated. Nollenberg seconded the motion.

The Council then discussed how to utilize the remaining \$4,256. The Council suggested applying the remaining \$4,256 as follows: \$2,000 for the Register of Deeds' office for the scanning deeds project and \$2,256 for a feasibility study for tile mapping in the Land and Water Conservation office.

A modified motion was made by Joski to include the proposed designation of the remaining \$4,256 as stated. Bonness seconded the motion. The motion was approved by all. Motion carried.

The Council reviewed the proposed 2019 Strategic Initiative Grant Projects. It was proposed that the \$50,000 grant be applied as follows: \$25,000 for an Orthophoto flight to be done by Pictometry; \$16,000 to complete the second half of the bedrock and road ditches probing project - \$10,000 to contract with UWGB and \$6,000 to the Land and Water Conservation office; and \$9,000 to the Register of Deeds' scanning deeds project.

A motion was made by Bonness to approve the proposed 2019 Strategic Initiative Grant Projects as stated. Weidner seconded the motion. The motion was approved by all. Motion carried.

The Council reviewed the allocation of Retained Fees for 2019. These fees must be designated and will be used as follows: \$12,000 for GIS consulting fees and \$13,000 for RPL functions within the LIO.

Hanson stated the LIO's tax levy impact is \$114,237.

The Council discussed Chapter 4 of the Land Records Modernization plan. The money must be allocated to projects. There is \$50,000 a year (\$100,000 total) available but no guarantee this grant will continue in the future. Suggested ideas included:

1. The City of Kewaunee would like their cemetery plots to be mapped in GIS.
2. Tile line mapping.
3. Document digitizing in the Land Information Office.
4. Data fiber connections.
5. Sheriff's Office E911 – Joski stated the State is in the process of developing a State site for each community to tap into. This would not be a county project.
6. Mapping easements.
7. Remonumentation maintenance.
8. Running fiber to the highway department and the Land and Water Conservation offices.
9. Expand the bedrock probing project done by the UWGB professor to the Towns of Montpelier and West Kewaunee for year 2020.
10. \$10,000 a year for additional work on Register of Deeds' scanning project.
11. Air photos in year 2021.
12. Technology to improve the data exchange speed between the Administration Center and the Land and Water Conservation office.

A motion was made by Bonness to approve Chapter 4 of the Land Records Modernization Plan with the proposed projects as stated, along with Chapters 1-3 which have already been pre-approved by DOA. Joski seconded the motion. The motion was approved by all. Motion carried.

Bonness made a motion to adjourn. Loining seconded the motion. The motion was approved by all. Motion carried.

The meeting adjourned at 11:05 a.m.

Respectfully submitted,

A handwritten signature in cursive script that reads "Tammy Malach". The signature is written in black ink and is positioned above the printed name.

Tammy Malach, Secretary