

Final Report

Version 10 Statewide Parcel Map Database Project

July 25, 2024 | *Appendix A Updated: June 24, 2025

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OVERVIEW

The **Version 10 Statewide Parcel Map Database Project** (V10 Project) was a joint effort between the Wisconsin Department of Administration (DOA) Division of Intergovernmental Relations and the Wisconsin State Cartographer's Office (SCO). This document describes the V10 Project, which ran from January 2024 to June 2024 as part of the Statewide Parcel Map Initiative established by Act 20 of 2013.

Project Objectives Achieved

- Create an updated statewide parcel database and map layer by integrating county-level datasets.
- Provide for download of parcel database and display map layer online.
- Continue implementation of a standard for parcel data known as the "Searchable Format," which is tied to Wisconsin Land Information Program grant funding for local governments.
- Assess and communicate county progress in achieving the Searchable Format.

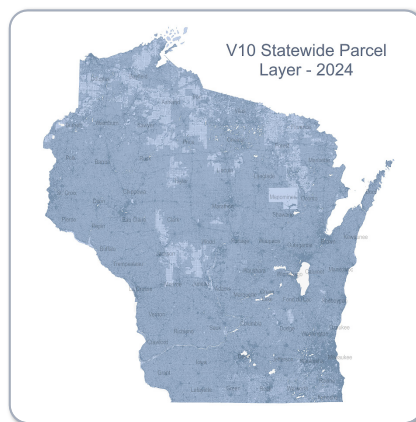
The V10 Project successfully aggregated all known digital parcel datasets within the state, resulting in a statewide GIS parcel layer of **3.56 million parcels**. The statewide data was standardized to meet the Searchable Format and made publicly available online on June 25, 2024. The V10 Project represents another successful step in the Statewide Parcel Map Initiative, an effort important for improving the quality of Wisconsin's real estate information, economic development, emergency planning and response, and other necessary citizen services.

PROJECT BACKGROUND

The V10 Project was another phase in the incremental approach of the Parcel Initiative—improving the statewide parcel map with each annual iteration. The V10 Project builds upon the experience of the LinkWISCONSIN and V1-V9 Projects. V10 was the ninth round of implementing standards for data submissions—the Searchable Format—which the legislature directed the Department of Administration to create in coordination with counties as part of Act 20 of 2013. In the Searchable Format, county data submittal is ready for immediate aggregation into the statewide parcel layer. Counties are to achieve the Searchable Format for parcel and tax roll data each year by March 31st.

TECHNICAL APPROACH

The technical approach taken by SCO staff involved several steps, including preparation and ingest, local-level processing, aggregation, state-level processing, and quality assurance/quality control. To support counties in achieving the Searchable Format, SCO developed a tool called the **Validation Tool** that counties are required to run in order to validate their data against the schema, as well as a suite of other geoprocessing tools. Once the statewide layer was created, data was distributed in several formats via a custom website and a web-based



mapping application. The web app allows someone without GIS software to view and search the statewide parcel map.

BENCHMARK PROGRESS ASSESSMENT

The final V10 layer represents progress over previous years. Two counties have yet to complete their digital parcel mapping—Buffalo and Burnett—notable progress, as that figure is down from 12 counties in 2014. Assessment and analysis of county data was conducted, with attention to what must be done for a county to meet the Searchable Format. The majority of counties came close to meeting the Searchable Format in their V10 data submissions. Very few met the Searchable Format exactly, with only a small number of counties submitting data that did not require

additional processing to meet all Searchable Format requirements. The majority of counties either required follow-up to obtain missing data or had processing steps performed on their behalf to get the data into the Searchable Format.

In addition to parcels, several other GIS data layers were collected as part of a collaboration with the UW-Madison Robinson Map Library. For V10, **450** new county data layers were cataloged, archived, and made available through the data portal GeoData@Wisconsin.gov.

RECOMMENDATIONS

Recommendations to improve and achieve better efficiency, accuracy, and final products include reviewing and updating the data submission Validation Tool, avoid any significant change to parcel schema for V11, develop a standard for mapping parcels that represent improvements with no land value, inform counties about schema deviations in data submitted for V10, attempt to join the statewide parcel database with DOR's XML tax roll files, and draft a plan to expand Searchable Format in the future. The Project Team will also have to plan to adhere to the Judicial Privacy Act for selected redaction. These recommendations are designed to be minimally disruptive for counties, yet ultimately lead to a statewide parcel layer that continues to improve with each annual iteration. ■

1 PROJECT BACKGROUND

1.1 Background

The **Version 10 Statewide Parcel Map Database Project** (V10 Project) was a joint effort between the Wisconsin Department of Administration (DOA) Division of Intergovernmental Relations and the State Cartographer's Office (SCO) that ran between January 1, 2024 and June 30, 2024.

Wisconsin Act 20 of 2013 created statutory directives through s. 59.72 and s. 16.967 for the state and local governments to coordinate on the development of a statewide digital parcel map, which is referred to as the Statewide Parcel Map Initiative, or Parcel Initiative. One of the statutory requirements was for DOA to determine a **"Searchable Format"** for parcel data and for all county data to be posted online in this standard. V10 is the ninth round of requesting that counties submit local data in the Searchable Format.

The V10 Project followed successful collaboration between DOA and SCO on similar efforts. In the past, DOA and SCO have partnered on a project to create statewide parcel and address point layers for the LinkWISCONSIN Address Point and Parcel Mapping Project (2013-2014), the Version 1 (V1) Project (2015), the Version 2 (V2) Project (2016), the Version 3 (V3) Project (2017), the Version 4 (V4) Project (2018), the Version 5 (V5) Project (2019), the Version 6 (V6) Project (2020), the Version 7 (V7) Project (2021), the Version 8 (V8) Project (2022), and the Version 9 (V9) Project (2023).¹

The V10 Project continued the approach of improving with each annual iteration through a process that allows for much involvement and collaboration with data contributors, who are primarily county land information offices, and data users—a wide array of persons from state agencies, private companies, and other entities and individuals.

1.1.1 V10 Project Goals

As part of the implementation planning for the statewide digital parcel map, the goals of the V10 Project were established in a memorandum of understanding (MOU) between DOA and SCO.

- **Meet statutory objectives and track progress.** The statewide parcel layer is built in an iterative fashion. V10 will continue to track the progress made with investments to local governments, specifically on benchmarks for parcel dataset development. A goal is to design an appropriate monitoring and evaluation framework to evaluate progress on the four benchmarks for parcel data:
 - Benchmark 1 – Parcel and Zoning Data Submission
 - Benchmark 2 – Extended Parcel Attribute Set Submission
 - Benchmark 3 – Completion of County Parcel Fabric
 - Benchmark 4 – Completion and Integration of PLSS
- **Incremental and continuous improvement.** Improvement of the statewide parcel layer itself, as well as the workflow and methods for each step in the aggregation process, with each new version of the layer. Exploration of areas for improvement should be based on research. As with the database, the hosting and display should keep pace with current technology and be continually improved to meet users' needs. Intake and aggregation process should be replicable and become more efficient with time, facilitating other improvements and/or opportunities for value-added products.
- **Outreach and technical assistance to counties.** This may take the form of further development of existing technical tools or the creation of new tools for counties and municipalities to use. It could also involve virtual or site visits and direct assistance.
- **Lean government principles and efficiency.** The V10 Project should seek to create and realize efficiencies in general, eliminate waste, and integrate or collaborate with other state GIS services where possible. An objective for this project is to move toward a more efficient, automated process for data aggregation where the locus of standardization labor is on the data contributors rather than the aggregator. Such a process would require fewer state resources be dedicated to the aggregation process and thereby reduce state costs for sustaining the statewide digital parcel map.
- **Responsiveness to public needs and economic development goals.** Evaluate parcel layer user suggestions and implement improvements where feasible.

¹ See V9 Final Report (2023 July); V8 Final Report (2022 July); V7 Final Report (2021 December); V6 Final Report (2020 October); V5 Final Report (2019 September); V4 Final Report (2018 November); V3 Final Report (2017 November); V2 Final Report (2016 November); V1 Interim Report (2016 June); V1 Final Report (2015 November); and Final Report: LinkWISCONSIN Address Point and Parcel Mapping Project (2014 September).

1.1.2 Project Timeline and Milestones

V10 Statewide Parcel Map Database Project Milestones	
Date	Version 10 Project Milestone
November 30, 2023	V10 call for data ready
January 1, 2024	V10 Project formal expenditure period start
January 2, 2024	Begin county data preparation assistance/outreach
February 28, 2024	Validation Summary Page concept document complete
March 31, 2024	V10 data submissions due
June 10, 2024	Draft V10 database for purposes of QA/QC
June 21, 2024	V10 web app updates with custom edits based on user feedback complete
June 30, 2024	V10 parcel map available online
July 31, 2024	V10 final report with final V10 workflow documentation
September 30, 2024	Final E6 PLSS database
October 15, 2024	E6 PLSS documentation and publication ready
November 1, 2024	Draft V11 data validation tool ready with revamped Validation Summary Page
November 15, 2024	V11 data validation tool finalized
November 29, 2024	V11 call for data ready
December 31, 2024	County outreach for V11 conducted
December 31, 2024	E6 PLSS final end-user feedback appendix ready

1.1.3 Project Team

V10 Statewide Parcel Map Database Project Team	
Howard Veregin, Project Co-Lead	Wisconsin State Cartographer's Office
Peter Herreid, Project Co-Lead	Wisconsin Department of Administration
Ana Wells	Wisconsin State Cartographer's Office
David Vogel	Wisconsin State Cartographer's Office
Thomas Kazmierczak	Wisconsin State Cartographer's Office
Hayden Elza	Wisconsin State Cartographer's Office
Param Bhandare	Wisconsin State Cartographer's Office (student)
Cole Wilson	Wisconsin State Cartographer's Office (student)
Davita Veselenak	Wisconsin Department of Administration

1.1.4 Outreach

V10 Conference Presentations and Outreach To-Date	
75th Wisconsin Society of Land Surveyors (WSLS) Annual Institute January 2024	Wisconsin County Surveyors Association (WCSA) Annual Membership Meeting Presentation
Wisconsin Land Information Association (WLIA) Annual Conference February 2024	WLIP & SCO updates at Land Information Officers Network meeting SCO In-Person Help Desk Hours
Wisconsin Land Information Council (WLIC) February 2024; June 2024	WLIP program updates
V10 County Assistance/Outreach Sessions March 2024; Virtual	Individualized assistance offered and provided as requested
Wisconsin Land Information Association (WLIA) Spring Regional Meeting May 2024	WLIP & SCO updates at Land Information Officers Network meeting

1.2 Documentation and Communication of Standards

The Submission Documentation set forth the required data submission standards for the V10 Project. There are four benchmarks listed by the WLIP Strategic Initiative grant application:

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

Together, Benchmark 1 and 2 make up the Searchable Format. The Searchable Format is detailed in the [Submission Documentation](#).




Figure 1. V10 Submission Documentation

1.2.1 New for V10

All attribute names, definitions, domains, and other schema requirements remained the same as last year. A few minor changes and updates are summarized on this page.

- **Validation Tool Updated.** Our project partners at the State Cartographer's Office have updated the Validation Tool. The basic operation of the tool remains the same. As with previous years, counties will need to run the tool in Test Mode first, to identify errors and schema deviations in order to rectify them.

For tool questions, contact help@sco.wisc.edu. After running the tool in Test Mode followed by Final Mode, to submit, all counties will need to do is zip the directory containing three auto-generated files:
 - COUNTYNAME.ini (submission form); COUNTYNAME_PARCELS.gdb; and COUNTYNAME_OTHER.gdb.
- **Repeal of the Personal Property Tax.** No major changes are being made to the V10 schema to accommodate the repeal of the personal property tax as part of Act 12 of 2023.
 - ▶ The personal property tax exemption will come into effect on January 1, 2024.
 - ▶ For V10, submit valuation-related (assessor-assigned) data associated with the parcel as finalized in the December 2023 tax roll (based on the parcel as it existed on **January 1, 2023**, because assessment data lags a year behind).
 - ▶ Due to Act 12, some parcels may have been created that are only for improvements. This means that the real estate associated with a parcel ID may only have an IMPVALUE associated with it but no LNDVALUE, and that the tax roll record would have no corresponding parcel geometry. Reference the [Building\(s\), Fixture\(s\), and/or Improvement\(s\) Document](#) for more information.
 - ▶ For V10, please do not submit these tax roll records which cannot be joined to a parcel polygon.
- **ESTFMKVALUE – No requirement to null ESTFMKVALUE for Ag/Undeveloped/Agricultural Forest & AUXCLASS Parcels.** While most properties are assessed at full market value, some classes of property—specifically 4, 5, and 5M—are not. In keeping with a precedent that was start during V6 in 2020, for V10, ESTFMKVALUE (Estimated Fair Market Value) values will continue to be nulled out for parcels that are wholly or partially PROPCCLASS 4, 5, or 5M; enrolled in the MFL/CFL programs (AUXCLASS W1-W9); and tax exempt (AUXCLASS X1-X4). However, **counties are *not* required to null ESTFMKVALUE for Ag/Undeveloped/Agricultural Forest & AUXCLASS parcels for V10, but it is optional for counties to do so.** This processing step will be performed by the DOA/SCO technical team on behalf of counties who wish to submit with these values populated. See ESTFMKVALUE for further information.
- **Submit PLSS Data.** If the county has the PLSS attributes listed in Appendix C in a digital tabular format, including a **PLSS corner ID attribute**, they should be submitted. The unique corner ID could be alphanumeric or numeric.
- **Submit Other Layers.** For V10, DOA is continuing to combine the V10 data request with Jaime Martindale of the UW-Madison Robinson Map Library (RML). Therefore, we are requesting a few other layers, listed in Appendix D.
- **Zoning Data Submission Requirements.** For V10, counties only need to submit three layers of county-maintained zoning data: 1)General, 2)Shoreland, and 3)Airport Protection. These may be submitted AS IS, except for a DESCRIPTION/LINK field requirement.
- **Searchable Format.** Counties will need to meet the Searchable Format in order to execute their 2024 WLIP Strategic Initiative Grant and receive the payment. In some cases in which a county does not meet the Searchable Format requirements with their V10 submission or fails to rectify errors from prior years' Observation Reports, the county may need to re-submit data.
- **Clarified Documentation.** The V10 documentation has been revised. Discard any old documentation and links. Replace with this updated [Submission Documentation](#) and V10 links. To avoid flags in the Validation Tool and ensure that data submissions meet the Searchable Format requirements called for by State Statute 59.72(2), **counties will need to carefully read this Submission Documentation and the Validation Tool Guide** before preparing data submissions. ■

1.3 Call for Data

The official V10 data request was sent to each county land information officer on **December 1, 2023** via email, and appears as Figure 2. It included a link to the [Submission Documentation](#), which serves as a manual detailing the requirements of the Searchable Format.

Dear LIO,

On behalf of the Department of Administration, I am writing to request a subset of your GIS data. The data acquired through this request will be used to develop a statewide parcel layer for the next version of the Statewide Parcel Map Database Project, Version 10.

All counties must submit parcel/tax roll data in the Searchable Format standard no sooner than December 31, 2023 and no later than March 31, 2024. To be accepted, submissions will need to meet the specifications for the Searchable Format and be free from any unexplained errors. A successful data submittal adhering to the Searchable Format is necessary in order to receive payment on your county's 2024 Strategic Initiative Grant.

PREP

The [V10 checklist](#) in the Submission Documentation summarizes the data request. The digital PDF checklist contains hyperlinks to attribute definitions and links to the full schema. Although there are no changes to the schema, a page titled [New for V10](#) summarizes what's new.

PARCEL FEATURE CLASS WITH TAX ROLL DATA

You will want to read the Submission Documentation in full, in order to understand the details of the V10 request. In addition, the [V10 webpage](#) contains all the necessary submission information and links to several tools to help you format your data.

OTHER LAYERS – PLSS & RML

Again for V10, all counties must **also submit PLSS corner data** (per Appendix C) and **additional GIS layers for RML** (Appendix D), which are being requested in order to aid in analysis of the statewide layer and as part of a collaborative effort with the UW-Madison Robinson Map Library.

VALIDATE WITH VALIDATION TOOL

The updated tool you must run before you submit your data, the Validation Tool, can check your data for deviations from the schema and is also required to create the mandatory Submission Form.

ZIP & SUBMIT

After prepping your data and running the tool to create your Submission Form, submit your data to [LTSB GeoData Collector](#). Log in using your credentials from the Legislative Technology Services Bureau.

Please note that the collection of municipal wards, municipal boundaries, and county supervisory districts will occur January 3rd–17th. This collection is also conducted through the LTSB platform.

Please submit your V10 parcel/tax roll data package by **March 31, 2024**.

FEEDBACK AND HELP

For some of the questions you might have, personalized assistance may be available by contacting us. For technical questions, you can email the State Cartographer's Office at help@sco.wisc.edu or call 608-262-3065. Feel free to contact me with general questions as well.

We realize that a substantial amount of work goes into this annual data submittal. WLIP Strategic Initiative grants were designed to aid in this task. Like the numerous end users who have shared positive feedback as reported in the [V9 Final Report](#), we sincerely appreciate your efforts to help make another update of the statewide parcel layer a success.

Thank you,

Peter Herreid
608-267-3369
Grant Administrator
Wisconsin Land Information Program

Figure 2. V10 Call for Data

1.4 V10 Assistance/Outreach

1.4.1 V10 Assistance/Outreach

For V10, an outreach element was included with the project to highlight the importance of county data preparation, assistance, and outreach. The table of V10 Conference Presentations lists outreach events that occurred via public presentations on the project.

All counties were encouraged to ask for assistance, if they so chose, in the call for data. Individualized assistance with data preparation was provided virtually as requested. LIOs may send questions to SCO via the SCO Help Desk at help@sco.wisc.edu.

SCO also offered in-person help desk hours at the State Cartographer's Office booth during the 2024 WLIA Annual Conference. Members of the parcel team were available on February 29 and March 1. LIOs were encouraged to come by with any questions about the Validation Tool, the V10 Submission Documentation, or the parcel submission process in general. One Land Information Officer from Rusk County stopped by to discuss issues related to the absence of MFL values from some parcel records.

1.4.2 Validation Summary Page V11

For V10, the V10 MOU added a new provision to update the Validation Tool with a draft V11 Validation Summary Page concept:

Validation of county data submissions and tools. . . . For V11, produce a validation tool output Validation Summary Page concept document which outlines the options for a revamped Validation Summary Page to provide dynamic information to the data preparer and highlight deviations from the project schema. For V11, provide an automated tool for validation that has been updated appropriately for V11 in accordance with the concept document to the extent feasible.

A draft document outlining the Validation Summary Page concept and development was created by the technical team in February of 2024.

A variety of options for developing an updated version of the page were explored. According to the concept document, the future Validation Summary Page will make use of a variety of updated JavaScript libraries and will provide additional feedback to county data submitters about their parcel feature class including:

- Summary of all flag counts in generalized categories (i.e., General Errors, Tax Errors, Address Errors, Geometric Errors).
- Categorized individual flag counts.
- Selection queries for isolating individual flags within records allowing for quicker selection of affected records.
- Color coded bar chart identifying major increases or decreases in values of given attribute fields.

The Validation Summary Page concept aims to make the data preparation process faster and more efficient.

The planning for the V11 version of the Validation Tool was written in to the timeline of the V10 Project. In November of 2024, the Validation Tool with revamped Validation Summary Page is scheduled to be ready.

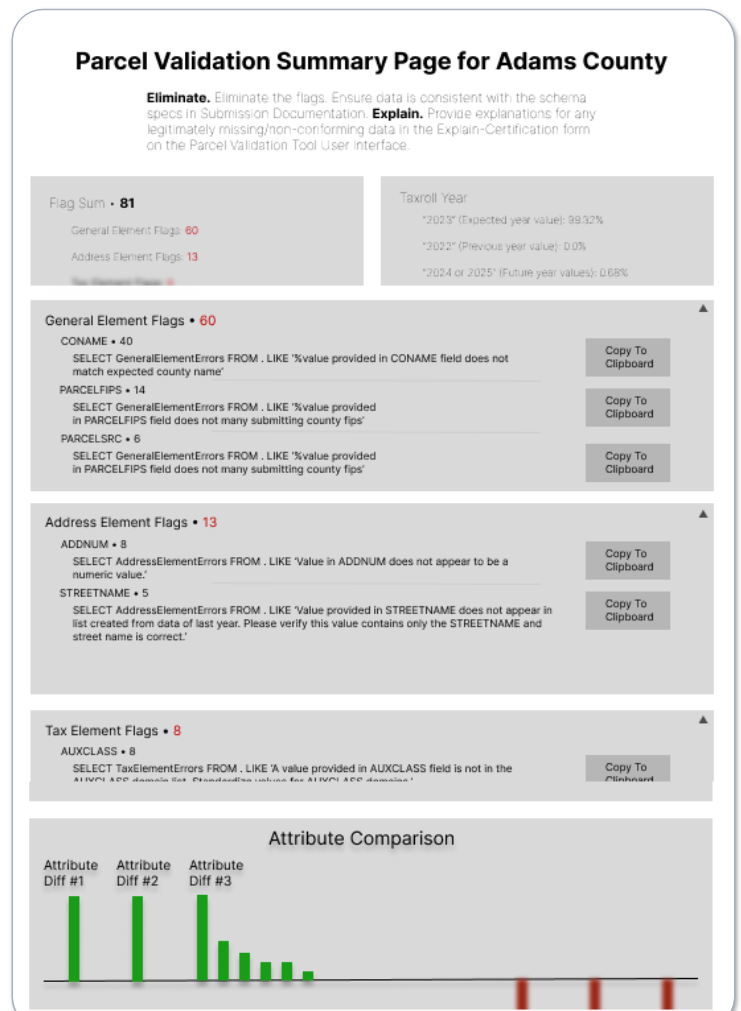


Figure 3. V11 Validation Summary Page concept

2 TECHNICAL APPROACH

This chapter describes the strategy or a high-level version of the approach employed by the technical team in processing and aggregating local-level data for inclusion in the final deliverable and statewide parcel map.

2.1 Tool Development

2.1.1 Updated Validation Tool

An updated Validation Tool was rolled out with the V10 call for data in December of 2023. It is a tool built by the State Cartographer's Office that counties were required to use before submitting data. The Validation Tool checked data for deviations from the schema, and was also required to create the mandatory Submission Form.

Data submitters could run the tool in test mode to flag potential errors in the data. The tool was run again in final mode in order to create the ".ini" Submission Form, a required part of the submission package.

For more details or to download the tool, see the Validation Tool Guide.

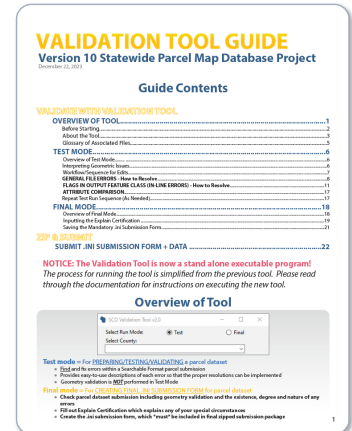


Figure 4. Validation Tool Guide

Validation Summary Page

The Validation Tool displays validation test results in a browser-displayed page called the "Validation Summary Page." The Validation Summary Page is a html file with a summary of Validation results that allows the user to visualize the potential errors observed in the dataset. This file opens automatically in a user's web browser upon completion of running the Validation Tool.

The *Validation Summary Page* provides a general overview of the condition of the dataset. It summarizes error status for "GENERAL FILE ERRORS" and for "FLAGS IN OUTPUT FEATURE CLASS (IN-LINE ERRORS)." The parcel data is ready for submission upon completion of an error-free Validation Tool test mode run and a corresponding *Validation Summary Page* file that says no errors have been found.

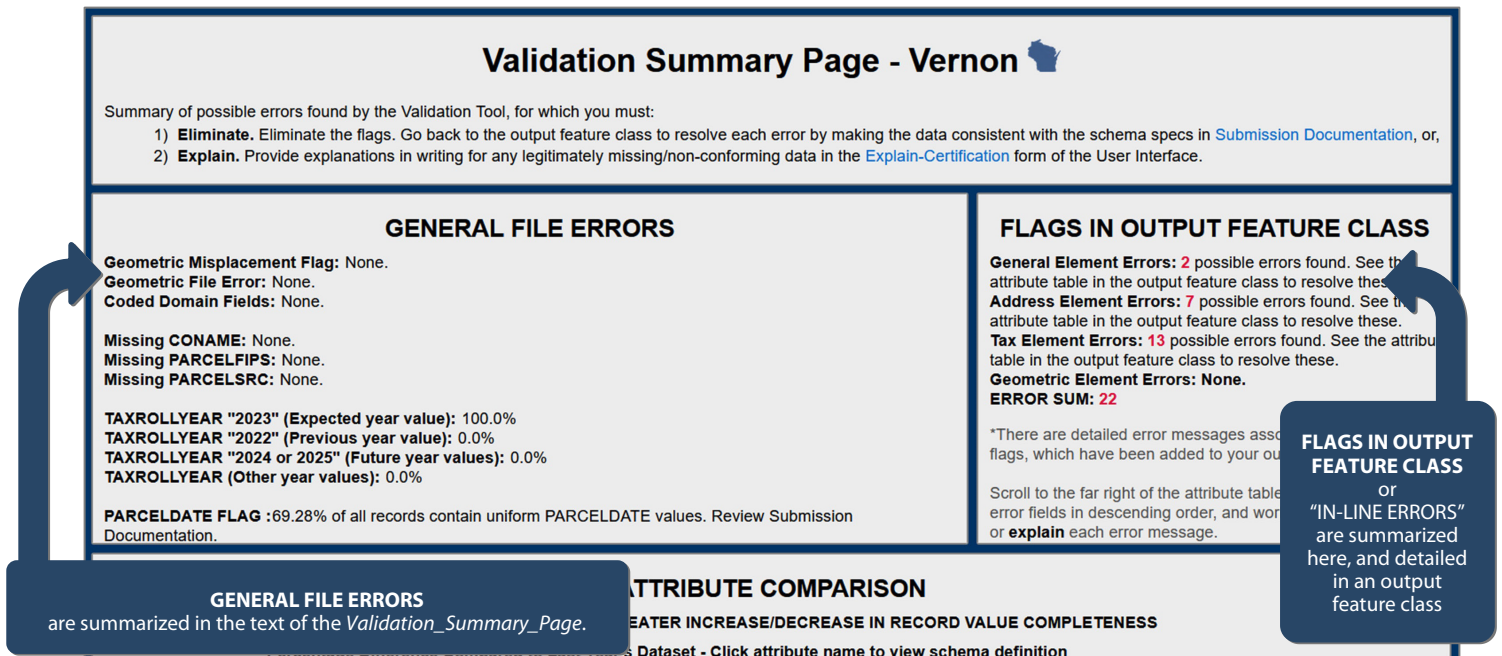


Figure 5. Validation Summary Page (example). This displays in full "GENERAL FILE ERRORS" and summarizes error status for "FLAGS IN OUTPUT FEATURE CLASS."

2.1.2 Geoprocessing Tool Development

To support counties in achieving efficient and accurate adherence to the standards in the Submission Documentation, the SCO developed a suite of publicly available geoprocessing tools using the ArcGIS ArcPy Module, Python 2.7, and open source libraries. In total, seven tools were created, and made publicly available through the data submission webpage.

The tools were supported under ArcGIS version 10.3 through version 10.8. Each of these tools were designed to enable efficient solutions to the most common and time-consuming problems related to preparing parcel and tax roll data to be submitted in the statewide schema. Accompanying the tools were user guides that documented how to prepare the data, run the tool, and troubleshoot if necessary.

- **Address Parsing Tool.** Allows the user to parse site addresses from one long string into sub-address elements. Data submitters might use this tool if SITEADDRESS data is not available as fully parsed address elements as required by the Searchable Format.
- **DOR XML Parse Tool.** Allows the user to translate Department of Revenue Tax Roll XML into a GIS table. For tax roll data in XML format that is to be used for parcel submission.
- **Data Standardize Tool.** Allows the user to standardize file geodatabase feature class data via the creation of a lookup table through a two-tool sequence. The first tool is used to create a summary table of a field. This table is edited and subsequently used as input to the secondary tool. The output of the second tool includes all original field domains as well as newly standardized domains in a new field.
- **Condo Stack Tool.** Allows user to model condominiums by stacking condo parcel geometries by owner. A data submitter might use this tool to model condo parcel geometries to match tax roll records with a 1:1 relationship.
- **Class of Property Dissolve Toolset.** Allows the user to format class of property data to statewide schema definitions. This suite of tools may be helpful if a submitter wishes to reformat their class of property information so as to meet the requirements of the schema definitions of PROPCCLASS and AUXCLASS. This tool also handles various common formats that class of property exists as and may be helpful if the submitters data exists in one of these formats.
- **Null Fields And Set To Uppercase Tool.** Allows the user to format all attributes within a feature class to <Null> and UPPERCASE. This tool may be helpful to a submitter if they wish to format their blank fields or fields annotated with a specific string to a true SQL <Null> or if they wish to set all fields to UPPERCASE alpha characters.
- **Field Mapping Workflow Documentation.** Allows a user to map parcel or zoning attributes to the statewide schema. This is not a tool but rather a guide that may be useful to a submitter if they have PARCEL or ZONING data formatted to the schema specifications, but the fields do not have the appropriate FIELD NAME, ALIAS NAME, DATA TYPE, or PRECISION.
- **Summary Table Guide.** Not a tool but a guide for GIS software summary tables, to examine data in preparation for submitting Searchable Format data. This guide is of particular use for cleaning, validating, and standardizing data.

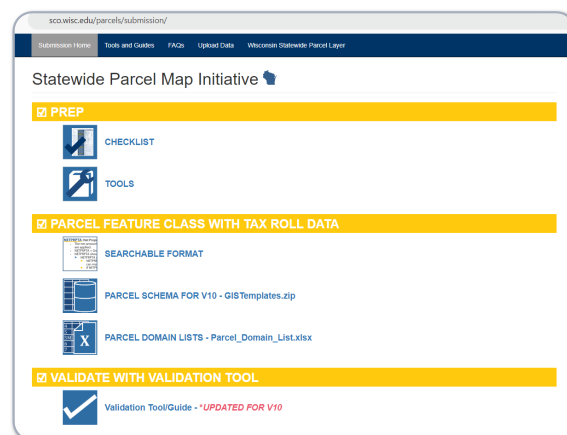


Figure 6. V10 Data Submission Webpage with Links to Schema and Tools

The following table displays the number of downloads for each of the respective tools:

Tool Download Stats								
	# of Downloads V3 (2017)	# of Downloads V4 (2018)	# of Downloads V5 (2019)	# of Downloads V6 (2020)	# of Downloads V7 (2021)	# of Downloads V8 (2022)	# of Downloads V9 (2023)	# of Downloads V10 (2024)
Validation Tool	108	118	84	117	112	95	116	101
Address Parsing Tool	48	46	36	27	37	34	22	26
DOR XML Parse Tool	24	36	17	34	24	31	19	15
Data Standardize Tool	28	27	22	40	39	29	20	20
Condo Stack Tool	21	19	9	16	15	19	15	42
Class of Property Dissolve Toolset	20	19	13	20	22	17	16	8
Null Fields and Set to Uppercase Tool	51	59	52	34	57	50	42	58
Field Mapping Workflow Documentation	36	34	21	19	18	17	20	12
Summary Table Guide	13	11	11	22	13	9	11	16

Note. Source of data is Google Analytics. Numbers represent unique downloads. The Validation Tool began with V3 in 2016.

2.1.3 Preparation and Ingest

In the data request, land information officers were asked to submit data to the Legislative Technology Services Bureau (LTSB) of the Wisconsin State Legislature, through the LTSB GeoData Collector platform. GeoData Collector is LTSB's suite of mapping tools designed to assist counties and municipalities with legislative and legal requirements as required by state statute. Some file uploads were also accommodated using UW-Madison's enterprise Box.com account through an [alternative upload widget](#).

The ingest phase began after the call for data. An automated email notification was sent to the project team any time a data submission to the LTSB GeoData Collector platform occurred. Once notified, the technical team would download the data via FTP login through Windows Explorer. After download, the data underwent a brief inspection, was documented as submitted, and then classified within the project's file directory. Depending on the amount of data submitted at any given time, the new data would either be assessed immediately or be queued for assessment according to the date the data was received. Also, upon receipt of data, the county data directory was backed-up locally, while additional data backups were routinely made to an external drive throughout the development phases.

Robinson Map Library and Other GIS Data

For other, non-parcel GIS layers, the Robinson Map Library (RML) also performed an intake assessment of submitted GIS datasets. For V10, **372 downloads with 450 other layers feature classes were added to GeoData@Wisconsin**—comprised of rights-of-way; roads/streets/centerlines; hydrography; address points; buildings/building footprints; land use and parks/open space; trails; and other recreation data. RML staff and students write thorough and complete metadata for all of the data layers, archive them, and make them available for download on GeoData@Wisconsin.

2.1.4 Intake Assessment

Once data was copied to local directories, the required .ini Submission Form was automatically ingested into the technical team's master intake spreadsheet. This .ini file played an important role in cataloging the data submitted. Information obtained from the .ini file included feature class names, condo modeling format, submitter name and email address, generic error counts, completeness relative to the prior year's data, and a section that allowed contributors to provide new street names, new non-parcel feature IDs, explain unsolvable errors, missing data, and other known issues present within the data submitted.

Next, the team recorded general notes related to attribute quality and completeness, geometric location, and other issues observed. The focus of this assessment was to determine if data met the submission requirements and establish what processing steps would need to be performed to get the data into the Searchable Format for aggregation, as the majority of counties did not submit data that exactly matched the Searchable Format.

To document the internal team intake workflow, a summary-level workflow documentation was created and is updated on a regular basis.

Showstop, Re-Approach, and Resubmit Requests

If, upon internal team discussion, it was determined that data was missing or incomplete, the county was re-approached and asked to resubmit corrected data or provide justification for the missing data. Several counties had to be re-approached to obtain data missing from initial submission, to get clarification on peculiar data observations, and for the correction of erroneous data. In total, approximately 37 emails were sent to resolve issues related to the fitness of data submissions. In a few cases, multiple follow-up emails were required to an individual county before their data submission could be deemed complete and proceed past the initial assessment phase.

V10 Versus Previous Re-Submits and Clarifications

	V3 (2017)	V4 (2018)	V5 (2019)	V6 (2020)	V7 (2021)	V8 (2022)	V9 (2023)	V10 (2024)
# of counties that had to be re-approached	29 counties (40%)	38 counties (53%)	19 counties (26%)	26 counties (36%)	27 counties (38%)	15 counties (21%)	11 counties (15%)	14 counties (19%)
# of emails sent to resolve issues	83 emails	60 emails	24 emails	34 emails	39 emails	19 emails	22 emails	37 emails

For V10, any intake issues that required county follow-up were sent to DOA via email so that a follow-up email could be sent to the county, under a "showstopper" umbrella for either for missing data, questions to counties, or clarifications on the data submission.

After it was determined that the data submitted could be efficiently manipulated and processed, detailed processing steps were written and recorded in a Microsoft OneNote notebook. These steps provided the team with the information needed to massage the data into the final format and prepare it for the aggregation phase.

2.1.5 Geometric Gap Analysis

To identify gaps in the statewide parcel coverage where digital parcels do not exist, a manual inspection was performed on every dataset. It is the responsibility of the county to integrate all available parcel datasets into their parcel data submission, even if the municipal jurisdiction (city, village) is the data steward for the parcel dataset.

The geometric incompleteness of the V10 statewide parcel layer and the **2 counties yet to complete county-wide digital parcel mapping** are summarized in the table below.

V10 Gaps Summary		
County	Number of Munis with Gaps	Municipalities with Gaps in Parcel Coverage
Buffalo	5	Part of: Alma (C), Buffalo (C), Fountain City (C), Milton (T), Nelson (T), plus several small gaps in various townships
Burnett	3	Part of: Swiss (T), Union (T), West Marshland (T), Anderson (T), plus few small gaps in Grantsburg (T)

For V10, there was no missing geometric data in the form of gaps where parcel data is maintained by a municipality but not aggregated to county-level parcels. However, some tax roll data that is maintained by municipalities independent of counties presented some challenges.

2.2 Independent Data Stewards

V10 Tax Roll Gaps Summary / Independent Municipalities	
County	Municipalities with Independent Tax Roll Data and/or Independent Parcel Geometries
Ashland	City of Ashland
Dane	City of Madison
Dodge	City of Watertown
Douglas	City of Superior (performs export for Douglas County)
Eau Claire	City of Eau Claire
Fond du Lac	City of Fond du Lac
Langlade	City of Antigo
Manitowoc	City of Manitowoc (Transcendent Technologies), City of Two Rivers (Patriot Properties, Inc.)
Milwaukee	City of Milwaukee, City of Wauwatosa, and all other municipalities
Outagamie	City of Appleton
Racine	City of Racine
Rock	City of Beloit, City of Janesville
Rusk	City of Ladysmith
Washington	City of West Bend
Waukesha	City of New Berlin, City of Waukesha, City of Brookfield
Winnebago	City of Oshkosh, City of Neenah, City of Menasha

- Note.**
- * This list is not exhaustive. Other municipalities that maintain parcel and/or tax roll data independently of the county may exist.
 - The fact that a county is listed here does not necessarily indicate that the county submission was incomplete—rather, it shows that extra effort was required by either the county and/or the project team to acquire and/or format the municipal data.
 - DOA seeks information on additional independent municipalities. Please send information to WLIP@wisconsin.gov.
 - **Locating Property Information and Tax Assessment Data in Wisconsin** - Reference page 4 of the V10 Attribute Schema documentation for hyperlinks that you can use to locate data.

2.2.1 Aggregation

The process of aggregating individual county datasets began upon the completion of all required processing tasks for each county. After verifying these tasks were complete and ensuring that data was in the Searchable Format, the finalized feature class for each individual county was identified and the full path was documented to allow the technical team to run a batch processing tool for aggregation.

Next, a new statewide working database was created that contained a merged feature class consisting of all 72 individual county parcel datasets.

Statewide logic

Statewide logic is tweaked each year, with adjustments and minor function modifications consistent with the schema.

State-level processing was performed on the resulting feature class. This processing included steps such as casting select fields from string to double, construction of the STATEID attribute for all records, creation of LATITUDE/ LONGITUDE fields (populated with values for the inside centroid of each parcel polygon), and general data cleaning tasks (e.g., removal of leading/trailing spaces, converting empty strings to <Null>, setting all attributes to UPPERCASE).

2.2.2 Quality Assurance/Quality Control

Beginning with the V2 call for data in the year 2016, data submitted has been required to meet certain documented standards, which make up the Searchable Format. These attribute field standards, attribute domain standards, and geometric representation standards were assessed as part of the QA/QC phase, as documented in the internal project assessment notes. Maintaining high quality datasets from one version to the next is of paramount importance to the Parcel Initiative. A variety of QA/QC methods were used throughout the project, including manually focused techniques, as well as more automated techniques that allowed for visualization across the entire state.

Manual cleanup techniques and tasks were performed across many of the datasets submitted. These included: address element standardization, address number cleanup, miscellaneous street name element parsing, excess field removal, et cetera. Often, the tasks were completed during the processing phase, prior to aggregation into the statewide feature class.

The automated QA/QC techniques were most often performed after the statewide feature class had been aggregated. With over 3.5 million parcels, it is not feasible to manually inspect every record. For this reason, summary tables and a variety of maps were created during this process.

Summary tables were created as a byproduct of the state-level processing and provided a discrete set of domains that existed for a particular attribute field. These tables are particularly valuable for fields such as PREFIX, STREETTYPE, SUFFIX, and PROPCLASS, which have specific attribute domain standards. These tables, used in conjunction with the Data Standardize Tool, allowed for corrections to be made efficiently and accurately. Maps were produced, typically using a choropleth scheme, allowing the visualization of spatial trends within individual municipalities, counties, and statewide. These trends could be hard to observe from the tabular data alone. Maps provided another valuable tool for discovering errors and issues that existed in the data and allowed for corrections to be made.

2.2.3 Final Deliverables

Geometric Coverage

Continued progress is being made in completing the digitization of parcels across the Wisconsin landscape, as indicated by the statistics below.

V10 Spatial Coverage Versus Previous Years

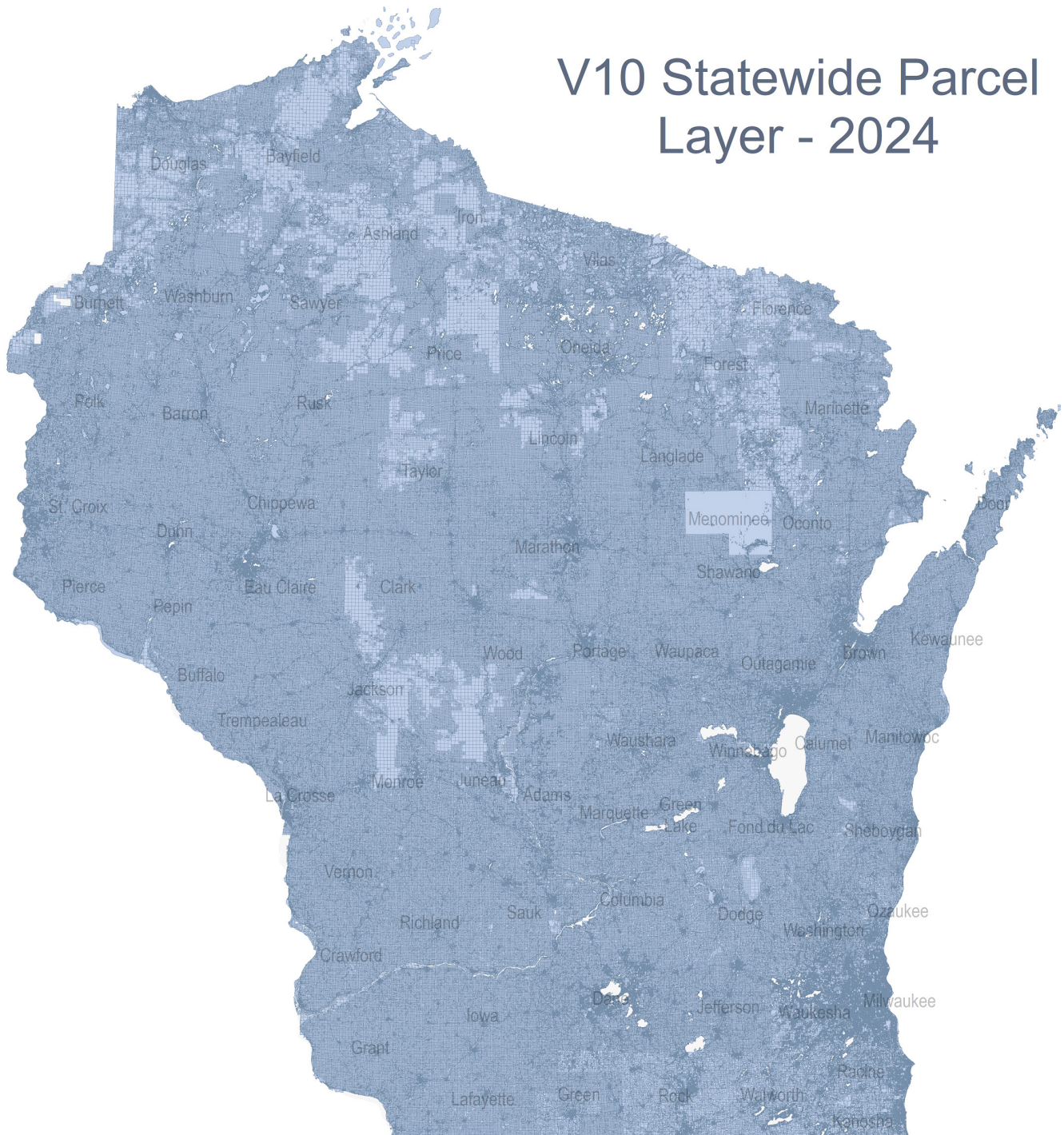
	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	Additional Coverage in V10	Percent Additional Coverage in V10
Number of features	3,434,149	3,466,359	3,486,200	3,491,037	3,504,785	3,507,127	3,520,942	3,529,979	3,540,285	3,557,950	17,665 features	0.29%
Coverage (in sq. miles)	53,656	55,280	56,060	56,193	56,403	56,410	56,389	56,426	56,452	56,364	-88 square miles*	-0.16%

Note. The coverage in square miles calculation does not represent a true 1:1 comparison between the actual area of the state in square miles and total parcel coverage in square miles. In instances where condo parcels are stacked, the square mileage value is inflated. Differences from year-to-year may be present due to varying ways in which non-parcel features and other unparcelled areas are geometrically represented or omitted.

*For V10, coverage appears less, but some counties improved accuracy by removing non-parcel features from their parcel datasets.

The final parcel layer totaled 3.56 million parcels and is shown in Map 1 on the following page.

V10 Statewide Parcel Layer - 2024



Map 1. Version 10 Statewide Parcel Layer Completed in June 2024

2.2.4 Note on Zoning

Although five publicly available Wisconsin county-administered zoning layers were aggregated as part of the Statewide Parcel Map Initiative for V3 and V2 (in 2017 and 2016), zoning data was **not aggregated** at the statewide level for V4-V10 in 2018-2024.

For information regarding the statewide zoning layers from 2016-2017, please see the [Parcel Project Zoning Change Log](#) and page 5 of the [V3_Wisconsin_Statewide_Parcels_Schema_Documentation](#).

Three zoning types were collected for V10—county **general zoning**, **shoreland**, and **airport protection**.

The Searchable Format for zoning data entails inclusion of **DESCRIPTION/LINK** information with the submission, in order to provide the user with definitions of the zoning classes.

Individual county datasets are publicly available through UW-Madison Robinson Map Library's geospatial data portal, [GeoData@Wisconsin](#). All zoning types are bundled as a single feature class and are indexed on page 22 of the [V10_Wisconsin_Statewide_Parcels_Schema_Documentation](#).

As part of the 2023 Wisconsin Comprehensive Plan and Local Land Regulations Inventory Report, for each of Wisconsin's 1,922 counties, cities, villages, and towns, the Comp Plan and Land Regs Inventory spreadsheet lists:

- Last known date of comprehensive plan adoption
- Whether a general zoning ordinance has been adopted
- Whether a subdivision ordinance has been adopted
- Link to the local government's ordinances webpage, if available

For the most current county zoning data, consult the individual [county's land records websites](#).

Towns, cities, and villages can also exercise zoning in Wisconsin, in which case end users might consult [municipal/town web mapping sites](#) for municipal-level zoning GIS data. It is generally best to **contact the authoritative jurisdiction** for the most complete zoning data.

2.3 Data Distribution

2.3.1 Database Download Webpage

The data was distributed via two primary means: a website with download links and a web-based mapping application. The V10 database was formally released to the general public on June 25, 2024, through the DOA land information email listserv and the data page at www.sco.wisc.edu/parcels/data.

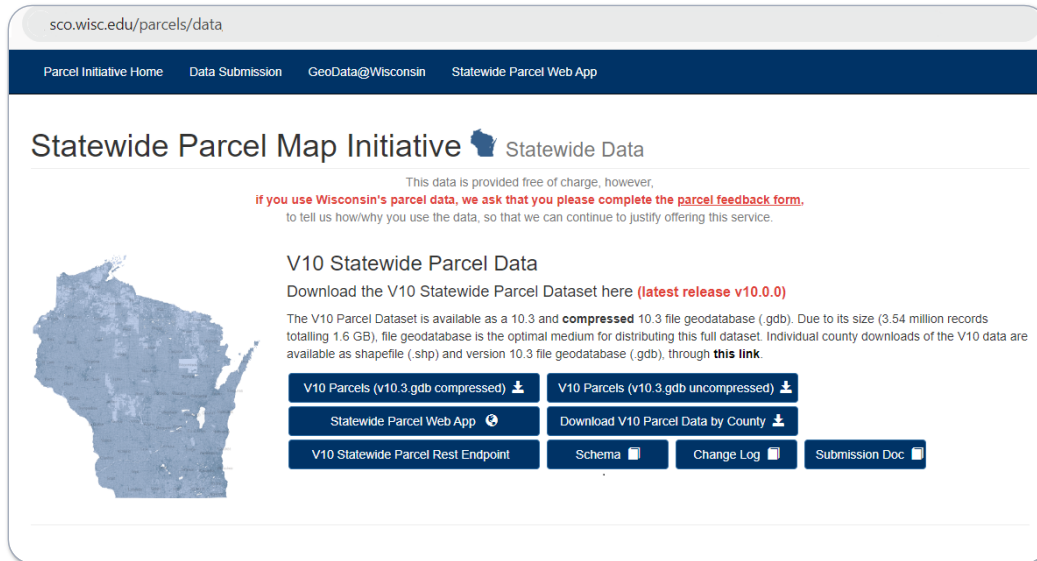


Figure 7. V10 Data Page

The custom webpage for data distribution was built and hosted by SCO, with the aim of flexibility. The site supports desktop, mobile, and tablet devices.

2.3.2 Web Application

The Wisconsin Statewide Parcel Map web application underwent a significant overhaul for its 2023 release and was further updated in 2024, making use of *ArcGIS Experience Builder Developer Edition*. This update introduced current JavaScript libraries, integrated an ArcGIS Online-hosted V10 Parcel layer, reduced custom coding, and expanded fuzzy search capabilities.

The design focused on improving and modernizing the user interface, with attribute search tips integrated directly into the query boxes, and a simplified basemap toggler for easier map layer control. Additionally, the implementation of fuzzy search capabilities allows for enhanced attribute search functionality and improved accuracy.

ArcGIS Experience Builder offered several built-in functionalities straight out of the box, but some additional customization was required:

- Custom widgets were developed, allowing for parcel fill transparency adjustment at the street zoom levels, simplified basemap toggling, and Google Analytics integration
- A custom CSS file allowed us to modify the aesthetic of the application. This integrated the search tips directly into the query boxes and hid some features from the application interface.

Overall, the comprehensive redesign of the Wisconsin Statewide Parcel Map application includes significant technological updates and continues to integrate user feedback to enhance the application. By leveraging modern technologies and prioritizing user-centric design, the application is well-equipped to effectively meet the diverse needs of its users, while continuing to serve as an indispensable tool for parcel data exploration.

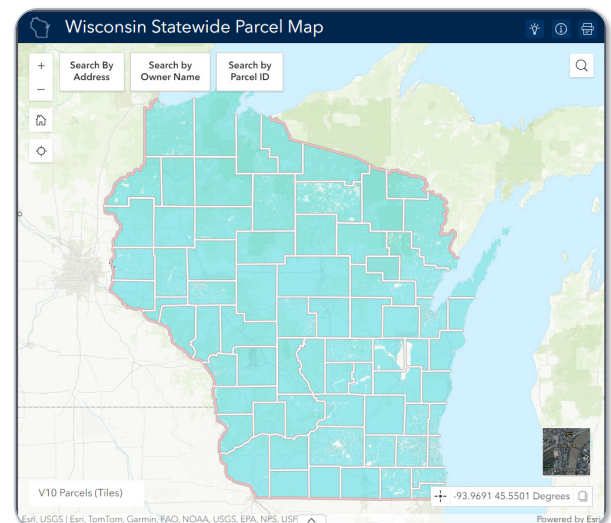


Figure 8. V10 Web App

Improvements to the V10 Web App

- New Feature Service.** As with V9, the V10 app featured a new ArcGIS Online-hosted V10 Parcel layer. The V10 parcel layer was published to ArcGIS Online using ArcGIS Pro as a feature service. The hosted view, Wisconsin Statewide Parcels, which was created during the V9 project, was updated to include the newly released V10 parcel data. This view is available for public use and can be integrated into user-created custom applications and maps. It allows for zero downtime minor-version updates during a parcel release year, if an update to the layer is required. Moreover, it continues to facilitate future major-version updates and releases without interrupting the parcel application and end users consuming the hosted view. This process relies entirely on the ArcGIS online cloud service as the hosting site.
- Inclusion of the V10 parcel data feature layers.** At the time of the release of the V10 statewide layer, only the V10 feature layer was included in the app at maps.sco.wisc.edu/parcels. However, users can still download a historic copy of the V1-V9 data at sco.wisc.edu/parcels/data and from [GeoData@Wisconsin](mailto:GeoData@Wisconsin.gov).
- Updates to supporting text/links and user feedback form.** All of the supporting text and links associated with the parcel application including, the Wisconsin Statewide Parcel Map app splash screen, *About* section, *Search Tips*, and data download links were updated. Updates were also made to the user feedback form (shown in Figure 9) and land information county contacts page, which directs users to Wisconsin's county-maintained land information websites.
- Standardized site address field for searching.** By way of a feature service, the V10 parcel application includes a field called "**STAND_SITEADD**," which facilitates a simplified, more streamlined search of parcels by site address.
 - In the file geodatabase for the statewide layer, the site address field—SITEADDRESS—appears "as is," with the physical street address of the parcel appearing exactly as it is provided by the county.
 - As a result of the differences in formatting for site address data at the county level, an end-user might need to perform multiple iterations of a search in order to find one desired address.
 - Particularly for the PREFIX and STREETTYPE fields, variations in spelling and abbreviations can be found in the SITEADDRESS field.
 - The standardized site address field, STAND_SITEADD, is created by:
 - Concatenating the elements that make up SITEADDRESS**, which counties are to submit as individual address elements:

Figure 9. V10 User Feedback Form

ADDNUMPREFIX	ADDNUM	ADDNUMSUFFIX	PREFIX	STREETNAME	STREETTYPE	SUFFIX	UNITTYPE	UNITID
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- Further refining the **PREFIX** field, so that it is standardized to a select number of domains:

CTH	STH	USH	INTERSTATE
N CTH	N STH	N USH	
E CTH	E STH	E USH	
S CTH	S STH	S USH	
W CTH	W STH	W USH	

- Improvements to End User Schema Documentation.** The V10 end user schema (V10_Wisconsin_Statewide_Parcels_Schema_Documentation) was also updated. The documentation contains several notes for end users including links to some of Wisconsin's assessment/tax data resources, *Locating Property Information and Tax Assessment Data in Wisconsin*.

2.3.3 Data Access and Download Statistics

Across the various formats that are offered, the statewide parcel database has received large numbers of downloads and access via web mapping services. **V9 received over 19,000 thousand downloads and over 45 million hits on web services** in the year following the V8 release date. Download and web app statistics for all years appear on the following page.

Statewide Parcel Layer Download and Access Statistics

	Downloads	Hits on Services or App Views/Requests
V3 V3 Parcels		
V3 Parcels (during year after release; all formats)	868	unknown
V3 Individual County Parcels, all 72 counties combined (all formats)	<u>2,203</u>	unknown
	3,071 Total	
V4 V4 Parcels		
V4 Parcels (during year after release; all formats)	1,142	4,453,517
V4 Individual County Parcels, all 72 counties combined (all formats)	<u>4,204</u>	NA
	5,346 Total	4,453,517 Total
V5 V5 Parcels		
V5 Parcels (during year after release; all formats)	1,715	10,090,958
V5 Individual County Parcels, all 72 counties combined (all formats)	<u>5,637</u>	NA
	7,352 Total	10,090,958 Total
V6 V6 Parcels		
V6 Parcels (during year after release; all formats)	1,755	unknown
V6 Individual County Parcels, all 72 counties combined (all formats)	<u>6,771</u>	NA
	8,526 Total	
V7 V7 Parcels		
V7 Parcels (during year after release; all formats)	2,461	11,424,840
V7 Individual County Parcels, all 72 counties combined (all formats)	<u>8,805</u>	NA
	11,266 Total	11,424,840 Total
V8 V8 Parcels		
V8 Parcels (during year after release; all formats; June 21, 2022-June 20, 2023)	4,980	10,039,237
V8 Individual County Parcels, all 72 counties combined (all formats)	<u>12,619</u>	NA
	17,599 Total	10,039,237 Total
V9 V9 Parcels		
V9 Parcels (during year after release; all formats; June 21, 2023-June 24, 2024)	7,016	45,505,900
V9 Individual County Parcels, all 72 counties combined (all formats)	<u>12,155</u>	NA
	19,171 Total	45,505,900 Total

Note.

- Data for V1-V2 appears in the V9 Final Report. Data that is not available is denoted with "unknown."
- The source for download data is Google Analytic events, as well as Box access statistics. Numbers are approximate. The source for hits figures is LTSB up through V8.
- V6 hits figures unavailable due to an LTSB server migration. V8 hits figure is partial due to LTSB reconfiguration of servers in 2022.
- Figures for hits are approximate.
- "Hits" numbers are subject to variation in definition. Here, hits may be "transactions." For ArcGIS server, a transaction is defined as any time the server or services is hit or pinged. Therefore, the number of hits is **not** an indicator of the number of unique users. A transaction is counted each time that a user makes a request to the service and data is returned (e.g., searching the web app, panning the map to an uncached area, clicking the map to procure attribute information).
- V9 represents the first full year where the parcel feature service was hosted in ArcGIS Online by DOA, so the method of computing hits or "requests" may be defined differently beginning with V9. Requests refers to the number of times a request is made for the data in a hosted web layer (e.g., opening an app counts as one request, but multiple requests may be necessary to draw all the features in the hosted layer and are counted individually).

Statewide Parcel Layer Web Mapping Application Statistics

	Sessions	Users	Pageviews
V3 App (Sep 7, 2017 – July 30, 2018)	31,013	15,602	56,423
V4 App (July 31, 2018 – June 30, 2019)	75,815	42,258	117,338
V5 App (June 30, 2019 – June 30, 2020)	121,326	65,239	164,188
V6 App (June 30, 2020 – June 2021)	156,517	78,837	196,033
V7 App (June 30, 2021 – June 20, 2022)	142,430	72,405	170,670
V8 App (June 21, 2022 – June 20, 2023)	168,417	87,401	200,902
V9 App (June 21, 2023 – June 24, 2024)	234,111	103,400	3,681,833

Note.

- The first date in the date range represents the public release date for the web app. Data source is SCO's implementation of Google Analytics.
- For the V9 app, the application was transitioned to a new application platform on June 21, 2023. The V9 app generates considerably more "pageviews" compared to the previous generation of apps. Sessions and users are more reliable benchmarks for tracking app usage over time.

Individual County Data Download Stats		
	# of	# of
	Shapefile Downloads	File Geodatabase Downloads
Adams	311	9
Ashland	144	1
Bayfield	133	2
Barron	178	1
Brown	147	3
Buffalo	106	0
Burnett	140	1
Calumet	85	2
Chippewa	146	1
Clark	141	0
Columbia	292	3
Crawford	201	1
Dane	240	5
Dodge	124	0
Door	122	0
Douglas	206	3
Dunn	114	0
Eau Claire	124	2
Florence	120	0
Fond du Lac	159	3
Forest	124	1
Grant	236	6
Green	94	1
Green Lake	83	0
Iowa	174	4
Iron	961	43
Jackson	155	6
Jefferson	147	2
Juneau	169	6
Kenosha	108	2
Kewaunee	92	2
La Crosse	145	2
Lafayette	151	3
Langlade	94	1
Lincoln	84	1
Manitowoc	112	2
Marathon	179	2
Marinette	221	14
Marquette	143	3
Menominee	134	8
Milwaukee	224	2
Monroe	129	3
Oconto	172	5
Oneida	138	1
Outagamie	116	2
Ozaukee	139	7
Pepin	100	1
Pierce	93	1
Polk	137	3
Portage	151	3
Price	190	2
Racine	119	1
Richland	116	3
Rock	150	2
Rusk	144	2
Sauk	184	3
Sawyer	126	1
Shawano	166	3
Sheboygan	109	1
St. Croix	144	2
Taylor	106	2
Trempealeau	104	1
Vernon	126	6
Vilas	113	1
Walworth	106	3
Washburn	111	4
Washington	152	4
Waukesha	190	6
Waupaca	99	1
Waushara	112	4
Winnebago	101	1
Wood	101	2
Total	11,107	229

Zoning Data Download Stats

Zoning Download Statistics

V3 V3 Zoning (Aggregated for V3)	Downloads	Hits on Services or App Views/Requests
Wisconsin_Zoning_2017 - All 5 zoning layers in one database	127	unknown
Airport	17	unknown
Farmland	37	unknown
Floodplain	27	unknown
General	65	unknown
Shoreland	28	unknown
	301 Total	

V4 V4 Zoning

SCO Data Page – All Zoning (all zoning types combined; from January 2017–Dec 2018)	113-194	NA
GeoData@Wisconsin - “2018” year data (GeoData stats not available)	NA	NA
GeoData@Wisconsin - Any year zoning data (GeoData stats; January 2017–Dec 2018)	89	NA
	202-283 Total	

V5 V5 Zoning

SCO Data Page - Zoning (all zoning types combined; from January 2019–Dec 2019)	196	NA
GeoData@Wisconsin - “2019” year data (GeoData stats not available, except Q4 [20])	20	NA
GeoData@Wisconsin - Any year zoning data (2019 sans September 2019)	227	NA
	443 Total	

V6 V6 Zoning

SCO Data Page - Zoning (all zoning types combined; from January 2020–Dec 2020)	302	NA
GeoData@Wisconsin - “2020” year zoning data (from January 2020–Dec 2020)	91	NA
GeoData@Wisconsin - Any year zoning data (from January 2020–Dec 2020)	456	NA
	849 Total	

V7 V7 Zoning

SCO Data Page - Zoning (all zoning types combined; from January 2021–June 2022)	237	NA
GeoData@Wisconsin - “2021” year zoning data (from January 2021–June 2022)	310	NA
GeoData@Wisconsin - Any year zoning data (from January 2021–June 22)	1,371	NA
	1,918 Total	

V8 V8 Zoning

SCO Data Page - Zoning (all zoning types combined; from January 2022–June 2023)	560	NA
GeoData@Wisconsin - “2022” year zoning data (from January 2022–June 2023)	159	NA
GeoData@Wisconsin - Any year zoning data (from January 2022–June 2023)	887	NA
	1,606 Total	

V9 V9 Zoning

SCO Data Page - Zoning (all zoning types combined; from January 2023–June 2024)	510	NA
GeoData@Wisconsin - “2023” year zoning data (January 1, 2023–June 30, 2024)	77	NA
GeoData@Wisconsin - Any year zoning data (January 1, 2023–June 30, 2024)	450	NA
	1,087 Total	

Note.

- V2 zoning figures appear as a range (e.g., 128-174) due to differences in Google Analytics versus Box access statistics. No statewide zoning data was produced as part of V1.
- For V9, due to changes in Google Analytics, statistics are not available between January 1, 2023 and June 19, 2023.
- “All zoning” means any and all zoning types—aggregated statewide layers (produced for V2/V3), individual county layers, and statewide layers produced by DATCP for farmland preservation zoning.
- Statewide GIS data for farmland and floodplain zoning may be available either from GeoData@Wisconsin and/or the following:
 - **Zoning – Farmland:** See Wisconsin DATCP for statewide farmland zoning data
 - **Zoning – Floodplain:** See FEMA for statewide floodplain zoning data

3 BENCHMARK PROGRESS ASSESSMENT

3.1 Benchmark 1-4 Progress Assessment

In the years 2016-2021, the notes from the Statewide Parcel Map Database Project intake process and assessment were formerly communicated to counties through documents called the [Observation Reports](#). The reports were individualized for each county, and contained observations related to the data submitted, with focus on how local data compared to the statewide schema.

The V7 Observation Reports showed precisely how local data compared to the benchmarks for parcel data laid out in the [WLIP grant application](#) and the [Submission Documentation](#), evaluating how close counties came to the Searchable Format for submission of parcel data.

Project staff documented what must be done yet to achieve the Searchable Format and thus meet Benchmarks 1 and 2. The intention was that the action items from the Observation Report be used as a checklist to help develop and groom the county's data to meet the Searchable Format in the future, and, where applicable, to call attention to reoccurring errors for those counties who submitted data with the same deficiencies or errors that had been pointed out to them in the past as issues to remedy.

Observation Reports were omitted from V8-V10. After several years of creating and sharing the Observation Reports with counties, the incremental gains achieved going through the exercise again for V8 and thereafter were projected to be marginal at best. Given that it required a significant amount of staff time to complete the Observation Reports, it was decided that staff time could be more productively directed to other areas of the Project, such as improving the Validation Tool.

3.1.1 OWNERNAME1 – Redaction of Owner Names

For the owner name attribute, some counties redacted owner names. Partial owner name redaction was conducted by 8 counties for V10, although some counties redacted only a very small number of records. An additional county—Kenosha—withheld all owner names, consistent with a local county board resolution.

Over time, this represents an improvement compared to the V1 database, in which 22 counties did not permit owner name display in the V1 statewide layer.

V10 Owner Name Redaction		
County	Scope	Percent Redacted
Kenosha	Entire county dataset	100.00
Barron	Partial	0.59
Brown	Partial	0.16
Columbia	Partial	0.30
Dane	Partial	10.20
Manitowoc	Partial	0.32
Sauk	Partial	0.15
Sheboygan	Partial	0.20
Vilas	Partial	0.37

3.1.2 Benchmark 1 & 2 Progress Assessment

Benchmarks 1-4 were initially defined in detail within the V1 Interim Report:

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

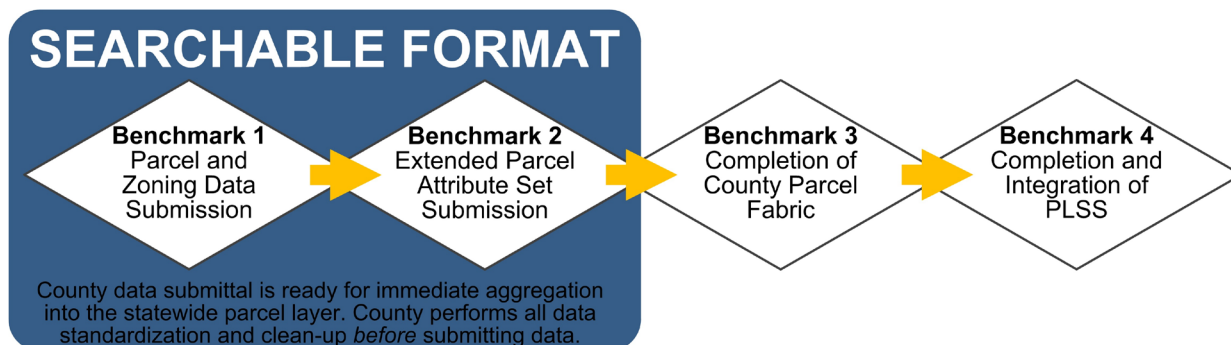


Figure 10. Searchable Format with Benchmarks

Benchmark 1 and 2 are explored below for the purpose of assessing progress from year to year. For both of these benchmarks, progress between the successive projects can be captured in comparing the individual V2 Observation Reports, V3 Observation Reports, V4 Observation Reports, V5 Observation Reports, V6 Observation Reports, and V7 Observation Reports.

Benchmark 1 & 2 – Parcel/Zoning Data Submission & Extended Parcel Attribute Set Submission

Benchmark 1 and 2 were satisfied by submitting parcel, tax roll, and relevant zoning information using the required standards detailed in the *Submission Documentation*. Because Benchmark 1 and 2 are closely related and go hand-in-hand, they are often discussed together. The main distinction is that for Benchmark 2, counties must submit parsed address components with their parcel data.

For parcel and tax roll data submitted for V1, V2, and V3, there were two submission format options—the "Export Format" and the "Searchable Format." For V4 and beyond, the Searchable Format was the only submission option.

The Searchable Format is a format that directly meets the data model requirements of the final statewide parcel layer. This format is not expected to change in the foreseeable future and is intended that only essential modifications be made for future iterations of the statewide parcel database. The Searchable Format is the format that all counties will be expected to use for future versions of the project.

The "Export Format" was a format for data exchange. Data received in this format—from 2016-2017—was processed by the parcel aggregation team to meet the data model requirements of the final statewide parcel layer. This format was acceptable for counties to use for submitting parcel and tax roll data for the V1, V2, and V3 projects, but the Export Format was phased out for the V4 Project, when it was no longer accepted. The Export format is not compatible with the desirable asynchronous update model and is a major obstacle to achieving the objective of automation and efficiency in statewide parcel aggregation. It was originally devised to accommodate variations in local data and allow counties time to gradually adjust to the submission requirements of the Searchable Format.

Parcel Data Evaluated Against Benchmark 1 & 2

Assessing progress in county achievement of the Searchable Format—equivalent to attaining Benchmark 1 and 2—can be performed by referencing the V2, V3, V4, V5, V6, and V7 Observation Reports. The Observation Reports track all substantial manipulation that needed to be performed on each county parcel data submission, on a per attribute basis. The table in the V7 Report on page 21 summarizes the progress between V2 and V7. Assessing progress in county achievement of the Searchable Format took a different shape with V8 through V10, residing in team discussions, internal team notes (e.g., OneNote notes), and evaluation against county grant applications.

The majority of counties came close to meeting the Searchable Format in their initial V10 parcel data submissions. Given the complexity and size of the local data, not all counties submit "perfect" Searchable Format submissions on their first attempt. Few counties met the standard for parcel data exactly with their initial data submission.

- Met Searchable Format for V10 parcel data submission on initial data submission: ~10 counties (14%)
Barron, Chippewa, Dodge, Dunn, Green, Juneau, Menominee, Pepin, Washburn, and Winnebago.

3.1.3 Benchmark 3 and Benchmark 4 Progress Assessment

Data for Benchmark 3, Completion of County Parcel Fabric—collected via the 2024 WLIP grant application (at the end of calendar year 2023)—is summarized below, as well as data for Benchmark 4, Completion and Integration of PLSS. These are the two counties who have yet to complete county-wide digital parcel mapping and **36 of 72 counties have PLSS remonumentation work remaining.**

Benchmark 3 Progress		
As of 2023	Counties with Incomplete Parcel Fabric	Estimated Year of Parcel Fabric Completion
	Buffalo	2024
	Burnett	2025

Benchmark 4 Progress		
As of 2023	Counties with Incomplete PLSS (Self-Reported; 36 of 72 counties)	Estimated Year of PLSS Network Completion
	Ashland	2035
	Bayfield	2039
	Buffalo	2029
	Burnett	2026
	Chippewa	2025
	Clark	2024
	Columbia	2028
	Crawford	2024
	Dane	2026
	Dunn	2030
	Eau Claire	2028
	Forest	2040
	Grant	2059
	Green	2037
	Green Lake	2025
	Iowa	2023
	Iron	2030
	Jackson	2035
	Lafayette	2030
	Langlade	2028
	Marathon	2025
	Marinette	2050
	Marquette	2030
	Monroe	2025
	Oconto	2031
	Oneida	2030
	Portage	2026
	Price	2030
	Rock	2024
	Rusk	2030
	Sauk	2030
	Sawyer	2035
	Taylor	2024
	Vilas	2025
	Waupaca	2024
	Waushara	2030
	Waushara	2030

3.3 E6 PLSS Sub-Project

As part of V5-V10, a full statewide Public Land Survey System (PLSS) layer, Edition 1, Edition 2, Edition 3, Edition 4, Edition 5, and Edition 6 were created and will be reported on separately.

Statewide PLSS data can be downloaded from www.sco.wisc.edu/parcels/data.

For background information on PLSS in Wisconsin, see the State Cartographer’s Office webpage on Land Surveying and PLSS Topics.

4 RECOMMENDATIONS

The collaborative exercise of DOA and SCO producing final reporting on each year's parcel aggregation project, complete with recommendations, is a requirement of the project [MOU](#). The recommendations contained within each year's final report and documentation of lessons learned are essential elements of the WLIP's regular program planning activities and serve as tools to help to evaluate the project and lay out a course for the future.

The methodology for composing the recommendations in the final project report for each year's parcel database were described in detail on page 24 of the [V6 Final Report](#). Recommendations below cover several areas, such as technology, tools, data request details, project workflow, and sustainability. Importantly, they take into account state-level needs at the same time as those of other end users and the local governments who produce the data that makes up the statewide parcel layer.

Recommendations for V11 and Beyond

1. Validation Tool: Strengthen Validation Tool

- An updated Validation Tool was rolled out with the V10 call for data in December of 2023.
 - Regular updates and audits of the Validation Tool functions and checks allow for providing consistent and accurate alerts to data submitters during the validation process. Updates and modifications are made to the Validation Tool on an annual basis in the interest of providing quality feedback for the data preparation process.
 - As with previous years, a goal is to make edits to Validation Tool to accommodate issues with the most common flags or those noted on the submission form. Tool logic can be refined, so that counties do not need to explain as much for common flags.
 - Another aspect of annual tool edits are updates for changes in technology and software.
 - There is also a need to address any Validation Tool bugs that were identified during the V10 submission process.
 - Some tool bugs were discovered during the county data submission process.
 - Most of these bugs were addressed or fixed during the year. A review of Help Desk tickets could be conducted to ensure any bugs that are feasibly fixable have been addressed.
 - For V11, edit validation checks and flags, including but not limited to:
 - **OWNERNME1**. Check flags for missing owner name (**OWNERNME1**) in **OWNERNME1**, based on St. Croix County feedback that missing owner names did not get flagged during the validation runs.
 - **STREETTYPE**. Consider including more types of standard **STREETTYPE** domains in the tool, as well as schema definition of **STREETTYPE**, based [V10 QA/QC results](#) (e.g., "GLEN").
 - **SCHOOLDIST**. If DPI accedes, ensure that only elementary districts are in the acceptable domain list. Flag use of incorrect districts.
 - **LNDVALUE**. Check tool for **LNDVALUE** = "0" and **IMPVALUE** = **CNTASDVALUE**, for Act 12 records.
- **Action:** Review Help Desk tickets and ensure any bugs presented during data submission have been fixed if deemed possible. Ensure a backup tool (V9 version) is available for use by counties that encounter issues running the updated V11 tool.
- **Action Item:** Make changes to tool, for draft V11 tool with revamped Validation Summary Page due on November 1, 2024, to be finalized by November 15, 2024 per the [V10 MOU](#).

2. Make no significant changes to parcel schema for V11

- Changes to the parcel schema, other than potentially reducing requirements for data submittal (e.g., deleting attributes or making them optional), would be disruptive to data submitters. This disruption would likely not be worth the small, incremental benefits that any changes would garner.
 - However, from time to time, small definitional changes to attributes are necessary, to reflect legislative changes to tax-related or land records laws, or for other justifiable reasons.
 - The parcel schema has remained consistent in structure and number of attributes since V6.
 - An external change may be needed before a drastically different approach to statewide parcel aggregation, and therefore a major schema change, is viable. For example, county-wide assessment, a legislative change, DOR is able to provide a statewide database of tax roll data in its [XML standard](#), or all local governments achieve DMA's Wisconsin NG9-1-1 GIS Data Standard & Best Practices. These or other developments at the state or federal level would warrant a deep reexamination of the parcel schema and data aggregation process, as would any leaps in technology.
- **Action Item:** Stay abreast of other state and national standards, their enforcement, and levels of compliance at the local level, as data is available.
- **Action Item:** Strive to maintain consistency with other enforced standards, while also taking into account local conditions and the diversity in local government land information systems that may stand in the way of a statewide "multi-purpose" standard for any one relevant GIS data layer (other than parcels that have geometry with tax roll attributes called for by statute [59.72\(2\)\(a\)](#)).

3. ESTFMKVALUE: Revisit redaction of Estimated Fair Market Value

- In addition to the assessed value, Wisconsin law requires that a taxation district show the estimated fair market value (aka equalized value) of taxable property on property tax bills for all classifications except agricultural land. This estimated fair market value reflects the approximate market value of property as of January 1st of the taxation year.
- Land classified as *Undeveloped* (PROPCLASS 5) or *Agricultural forest* (PROPCLASS 5M) is assessed at 50% of market value under Wisconsin law. Previously, the ESTFMKVALUE ("Estimated Fair Market Value") was listed at 50% of value too, which was misleading on account of the title of this attribute. However, it appears that for most counties, such as those employing Catalis and Transcendent software, the ESTFMKVALUE listed for parcels that are fully 5 or 5M is now 100%.
- This calls into question whether values should then be redacted for parcels fully or partially populated with PROPCLASS 5 or 5M, as well as when for other parcels, such as those enrolled in the MFL/CFL programs (AUXCLASS W1-W9).
 - ▶ **Action Item:** Take an inventory of tax bills with PROPCLASS 5 or 5M fully or partially, as well as tax bills with parcels fully or partially enrolled in the MFL/CFL programs (AUXCLASS W1-W9).
 - ▶ **Action Item:** Depending on the inventory, consider revising the request for counties to null out ESTFMKVALUE, and to what extent SCO should be doing it at the state level.

4. SCHOOLDIST/SCHOLDISTNO: Edit attribute definitions for School District/School District Number

- During V10, it was discovered that the schema attributes SCHOOLDIST and SCHOOLDISTNO have unclear or misleading definitional components.
- For areas that apply a Union High School (UHS) district, the elementary district should be the district populating this field. Counter-intuitively, elementary districts are the "parent" the UHS district. Therefore, the UHS district should **not** be included in the data submission.
 - ▶ **Action Item:** Amend attribute definitions with the following sentence in both attributes:
 - Areas that apply a Union High School (UHS) district, the **UHS** elementary district should be the district populating this field. **Elementary districts within a UHS are known as "children" of the "parent" UHS district and UHS districts** should not be included in the data submission.
 - ▶ **Action Item:** DOA contact DPI for authoritative list of district domains, confirm definition with a DPI policy expert that only elementary districts should be submitted, and gauge potential for SCHOOLDIST workflow change with a few county stakeholders.
 - ▶ **Action Item:** Edit GIS template to ensure that none of the elementary districts are in acceptable domain list, and Validation Tool flags, if necessary.

5. NETPRPTA/GRSPRPTA: Edit attribute definitions for Net Property Tax/Gross Property Tax

- Within the 2017-19 budget (2017 Wisconsin Act 59), the state eliminated the forestation state tax. Therefore, there is no longer a line on property tax bills for a state property tax.
- The definition for NETPRPTA (Net Property Tax) and GRSPRPTA (Gross Property Tax) should reflect the current formula for calculating both. Leaving state tax in the formula does not cause a miscalculation because it is \$0, but it may cause confusion as to why it is there.
 - ▶ **Action Item:** Remove "[STATE]" from the formulas for calculating
 - **NETPRPTA/GRSPRPTA:** $\text{NETPRPTA} = \text{[STATE TAX]} + \dots$ and $\text{GRSPRPTA} = \text{[STATE TAX]} + \dots$

6. AUXCLASS: Alter definition of Auxiliary Class of Property to include W4 under tax exempt

- The AUXCLASS "W4" designation is for County Forest Crop Land.
- Because it is county-owned, it is tax exempt.
- Moving the listing of W4 from AUXCLASS SPECIAL to AUXCLASS EXEMPT should not affect county workflows for exporting and submitting parcel data, but more research is needed to confirm, based on how and why DOR classifies W4 as AUXCLASS SPECIAL in their documentation on forest parcels (not merely the general DOR WPAM Standard Exemption Codes).
 - ▶ **Action Item:** Research topic, then, if appropriate, alter the definition of AUXCLASS so that W4 County Forest Cropland is listed under "AUXCLASS EXEMPT accepted domains and definitions for Exempt from General Property Taxes" instead of under "AUXCLASS SPECIAL accepted domains and definitions for Special – FCL, MFL and County Forest Crop Land."

7. Due to Act 12, determine a mapping standard for submittal of parcels without a Land Value

- 2023 Wisconsin Act 12 exempts personal property from taxation.
- Some properties previously taxed as personal property will be taxed as real property.
- Due to Act 12, some parcels may have been created that are only for improvements. This means that the real estate associated with a parcel ID may only have an IMPVALUE associated with it but no LNDVALUE, and that the tax roll record would have no corresponding parcel geometry.
- Parcels that are improvements without land are now typically recorded with the Building(s), Fixture(s), and/or Improvement(s) Document.
- These changes for property tax assessments went into effect January 1, 2024, so they would first effect V11.

- For V11, there is potential for a standard in the DOA Submission Documentation that might resemble the following:
 - Submit records as stacked polygons (**not** points) with a unique PARCELID, with all assessor-assigned attributes populated, including LNDVALUE populated with "0."
 - Ideally, polygon shape/location should match the legal description (and **not** simply be a duplicate of the underlying land parcel). Improvements-only parcels should be "on top" of the underlying land parcel, similar to the "Distributed" model of condo stacking, Condo Type #4.
- ▶ **Action Item:** From the draft county 2024 land information plans, DOA gather information on the number of parcels without a land value recorded to-date in each county, as well as how each county geolocates/maps parcels for improvements without a land value.
- ▶ **Action Item:** In coordination with stakeholders, DOA/SCO create a standard for submittal of parcels without a land value for the V11 call for data. For example, this could require that counties submit stacked polygons for parcels with no land, similar to a condo stacking model.
- ▶ **Action Item:** Anticipate minor schema clarifications in the V11 Submission Documentation with reference to the model for stacking condos on page 6.
- ▶ **Action Item:** Determine whether any Validation Tool flags need be added or edited to accommodate records.

8. Due to Act 235, create plan to handle requirements of the Judicial Privacy Act

- 2023 Wisconsin Act 235, otherwise known as the Judicial Privacy Act, requires state and local governments to shield the personal information of judicial officers and their family members, per official request. Personal information includes home address. Additionally, names must not be searchable on land records websites.
- The law comes into effect on April 1, 2025.
- The exact implications and requirements of Act 235 are still being reviewed by legal counsel, at state, local and organizational levels.
- Upon interpretation by DOA legal counsel, it will be necessary to proceed with a plan on how to adhere to Act 235.
 - ▶ **Action Item:** Proceed with a plan on how to adhere to Act 235.
 - ▶ **Action Item:** For V11 MOU, build into timeline and workflows a plan for labor related to redaction.
 - ▶ **Action Item:** Anticipate communications with V11 and changes to the V12 call for data.
 - ▶ **Action Item:** DOA request that the Director of State Courts create the legally-required form to include:
 - (a) parcel ID number; and
 - (b) from 757.07(4m)(b), opt out from display and search functions of names on a provider's public-facing land records website.

9. Inform counties about issues with data discovered during QA/QC of V10 database

- In the years 2016-2021, the notes from the Statewide Parcel Map Database Project intake process and assessment were formerly communicated to counties through documents called the *Observation Reports*. Observation Reports were not part of V8-V10, but many counties still required processing for their datasets to match the schema requirements of the Searchable Format.
- What appears to be some minor issues with parcel schema adherence were discovered during the DOA's quality assessment/quality control of the draft V10 statewide parcel database.
- Rather than asking the specific counties to correct or resubmit data, the decision was made to possibly inform the counties later, so that they could correct the issues in their V11 data submittals in 2025.
- Minor miscellaneous issues were found in approximately 6 counties (Ashland, Dane, Douglas, Outagamie, Ozaukee, and Winnebago).
- A specific issue uncovered affecting 68 counties is the owner name designation of state-owned lands.
 - A file was filtered for an AUXCLASS of "X2" (state-owned) and then again for what appears not to have an OWNERNAME1 that is clearly a state-owned entity name.
 - There are 1,762 such parcels identified in 68 counties.
 - DOA could contact the county LIO to request that they review the OWNERNAME1 data. It may also be necessary to contact municipal assessors to request a specific review/verification of the proper assessable/exempt class status of the parcels and code them properly for the next cycle of assessment and tax rolls to begin in January.
 - If any of these parcels should have been listed as a taxable parcel, then the municipal assessor should be directed to follow the procedure to report omitted assessments from the prior two years to the DOR, county, and property owner per WI Stats. s.70.44 and the WPAM Chapter 4 (pages 4-8).
 - If the counties make their follow-up requests to the municipal assessors before the calendar year 2024 tax roll is completed this November, then **the omitted parcel corrections could net jurisdictions tax revenues** going back to January 1, 2022.
- ▶ **Action Item:** DOA send an LIO listserv email or a 68-county email encouraging rectification of state-owned lands issues.
- ▶ **Action Item:** Inform the counties for which minor but not trivial parcel schema adherence issues appear to have occurred with their V10 parcel data submittals for V11 data prep purposes.

10. For V11 call for data, update the *Address Parsing Tool* if needed

- The Address Parsing Tool may require updates to function within the ArcPro environment. This could include updating libraries (the *US Address* library in particular), or possibly a complete tool rewrite.
- ▶ **Action Item:** SCO explore and research changes required to ensure Address Parsing Tool compatibility with ArcPro. The MOU timeline lists November 15, 2024 as the V11 tool finalization date.

11. For V11 call for data, update the *DOR XML Parse Tool* if needed

- **DOR XML Parse Tool Updates.** DOR made a substantive update to their XML format, announced in January 2024.
- The DOR XML assessment and tax roll web page, 2024 Assessment and Tax Roll Electronic File Transmissions, contains the documentation, including the Excel schema documentation.
- It is not clear if this will affect the parcel tools, such as the DOR XML Parse Tool and the corresponding *DOR_XML_Parse_Tool_Guide*. The DOR XML Parse Tool is used to translate Wisconsin Department of Revenue tax roll XML into a GIS table to help meet the Searchable Format.
- The current tool may become out-of-date, based on XML changes.
- The *V9_Final_Report* says there were between 19-31 downloads of the DOR XML Parse Tool in the last couple of years, and for V10, the tool was downloaded 15 times.
- An abridged summary of XML changes for 2024 appears below.

DOR - 2024 XML Summary and Reminders (abridged list)

- **Schema changes for 2024**
 - Validating Parcel ID format to our website – see row 24 of the Excel schema documentation
 - Parsing out address into discrete fields – see rows 50-54; 56-58; 79-84 of the Excel schema documentation
 - Use StreetName for additional miscellaneous data – see row 186 of the Excel schema documentation
 - Allow subclasses of property type – see rows 190-193 of the Excel schema documentation
 - Update country code to USPS format – see line 60 of the Excel schema documentation
 - **Parcel numbers**
 - Provide formatted parcels numbers with punctuation (ex: "." and "-")
 - See the DOR current parcel number formats for each county
 - **Tax incremental district (TID) parcels**
 - **Parcels without a situs address**
 - See filing assistance document
 - Send DOR your public (redacted) data to maintain consistency with providing any data.
- ▶ **Action Item:** Review changes to DOR schema and determine if there any implications for V11.
- ▶ **Action Item:** Update DOR XML Parse Tool, if necessary.
- ▶ **Action Item:** If tool is updated, consider adding a check on name of XML file to ensure that only the finalized tax roll is being used as the tool's input.

12. Try to join statewide digital parcel map database to DOR's XML tax roll database

- The Department of Revenue has gained compliance from all 72 counties with its XML tax roll standard, enabled by 2021 Wisconsin Act 55, which requires the county treasurer to provide DOR with the complete county tax roll by March 15 of each year.
- DOR is currently considering expansion of its XML tax roll schema to include more property record card attributes, according to an employee of OTAS (Office of Technical and Assessment Services).
- In the past, DOA/SCO have made various attempts to utilize DOR's county-wide XML tax data and cross-reference it to the Searchable Format for parcels.
- When the V2 database was joined with some DOR XML tax roll files in 2016, the following issues were documented:

DOR XML Not Parcel-Compatible List (2016)

- ▶ **PINs** – Incompatible Parcel ID forms, where punctuation like spaces, dashes, and periods prevent joins
- ▶ **Condo modeling**
- ▶ **Parsed address components**, or lack of address parsing in the older DOR XML standard
- ▶ **Estimated fair market value field** optional in XML
- ▶ **Public lands not designated** – with lack of common standard for public lands
- ▶ **Lack of common class type codes**
- ▶ **Owner name redaction**
- ▶ **No geometry** in DOR XML
- ▶ **No zoning** in DOR XML, zoning information is required by DOA under s. 59.72
- ▶ **School District Number** – DOR's electronic file utilizes a 6-digit code. One must manually remove the first two digits of the code (representing the alphabetized WI county name) to be Searchable Format-compatible
- ▶ **MFLVALUE** – XML lacks single field equivalent to "MFLVALUE" – see bottom of page 5 of the *DOR_XML_Parse_Tool_Guide*.
- ▶ **ESTFMKVALUE** must be nulled in the Searchable Format out for parcels not assessed at full market value [PROPCLASS 4, 5, or 5M; AUXCLASS X1-X4; AUXCLASS W1-W9]

- In 2023, when a DOR employee attempted to join a DOR XML tax roll database with the statewide parcel map, issues of incompatible parcel IDs were noted, but not much documentation was provided by DOR.
- A fresh attempt at joining the two statewide databases could **update the documentation of XML-to-Searchable Format join/compatibility issues** and be more thorough.
- The goal would be to determine how feasible it would be to join the statewide digital parcel map database to DOR's statewide XML tax roll database.
- DOR does not/cannot publicly share its statewide XML tax roll database (with one cited reason that DOR is not at liberty to share all of its XML tax roll files due to issues regarding owner name redaction, because in the past at least, DOR does not allow for any owner name redaction from the XML tax roll files).
- There may need to be accommodations or workarounds for complicating factors, such as a confidentiality agreement signed by a government agency (as required by s. 757.07(2)(b)3), or only a sampling of individual county datasets may be used for an attempted join.
 - ▶ **Action Item:** DOA request the statewide the XML tax roll database from DOR in both XML and database/Excel formats, or at least a sampling of counties.
 - ▶ **Action Item:** DOA/SCO attempt a join, research topic, and thoroughly document issues with joining statewide parcel map database to DOR's statewide XML tax roll database or a sampling of XML tax roll files.

13. Create a plan to expand Searchable Format standard to include more attributes

- There is potential for several factors to significantly impact the Parcel Initiative, the Searchable Format, and WLIP Strategic Initiative grants in coming years, including:
 - DOR XML compliance and DOR-led XML, PA-500 property record card, and CAMA-related endeavors.
 - Act 235 Searchable Format standard for redaction of judicial owner names.
 - Act 235 DOA/SCO workflow and labor for redaction of judicial owner names.
 - Potential for future legislative changes affecting the WLIP.
 - Although **not** enacted, Legislation to raise the Register of Deeds document recording fee that funds county land information was introduced in the 2023 Legislative Session (as 2023 AB-915/SB-872).
 - WLIA leadership has stated an intention to continue work on similar legislation in future sessions.
 - What was proposed in AB-915/SB-872 would increase the fee from \$30 per document to \$45, which would have the potential to increase the funding in the Land Information Fund that funds WLIP grants to counties.
 - Potential for increased Strategic Initiative grant funding opens the door to the possibility of potential for increased Strategic Initiative grant funding **requirements**, such as a new Benchmark or an expanded Searchable Format in the **WLIP grant application**. (e.g., a **"Searchable Format 2.0"**—a parcel standard that includes more PA-500 property record card attributes).
 - In other words, a potential increase in funding could, in theory, be used to enhance the statewide parcel map. Specifically, DOA could potentially include more property tax assessment attributes in the statewide parcel map, in a coordinated effort with the counties and DOR.
- Land records professionals from the real estate industry, emergency management professionals, real property listers, and DOR have long recognized the need for efficiencies and other benefits to be gained by adding more property information to parcel data collected at the county level and aggregated at the state level. The data exists on **property record cards** filled out by assessors at the municipal level, but is not collected in non-proprietary software and aggregated at the state level.
- These desirable data points include:
 - Number of housing units, story height, bedrooms, bathrooms, square footage of the house, acreage by property class, and more
- The Department of Revenue has gained compliance from all 72 counties with its **XML tax roll standard**, enabled by 2021 Wisconsin Act 55, which requires the county treasurer to provide DOR with the complete county tax roll by March 15 of each year.
- DOR is currently considering expansion of its XML tax roll schema to include more property record card attributes, according to an employee of OTAS (Office of Technical and Assessment Services).
- Therefore, a likely approach for adding attributes to the statewide parcel database would be to first join the parcel database to DOR's statewide XML tax roll database.
- There may be other sorts of enhancements beyond property record card attributes warranted or desired, which might also be conceived of as a part of Searchable Format 2.0.
- There are funding considerations for Searchable Format 2.0. It may not be possible to implement the plan to expand the Searchable Format without additional funding, such as funding for counties to add more attributes
- A **concept document/plan** could attempt to identify some costs and benefits.
- Learning from the success of the implementation of the first set of parcel standards in the original Searchable Format as outlined in the 2014 WLIP *"Strategic Initiative grant concept,"* potentially instructive could be the **Statewide Parcel Map Initiative Planning Process Framework** and overview of the post-Act 20 planning process as detailed in the WLIP Program Plan.

- ▶ **Action Item:** Try to join statewide digital parcel map database to DOR's XML tax roll database. Use information from the test join of statewide parcel map database and DOR XML tax roll database to inform the concept document/plan.
- ▶ **Action Item:** Develop a concept document/plan to expand the Searchable Format to include more attributes for V12 or V13.
 - Prioritize a list of property record card and/or XML attributes to possibly be included in the Searchable Format.
 - Consider the possibility of allowing municipalities and counties to update non-assessor-assigned information more than annually.
- ▶ **Action Item:** Coordinate with DOR on the concept document/plan.
- ▶ **Action Item:** Solicit input from general land information community after first version of concept document/plan or advanced draft is complete, probably not until at least the second half of 2025.

14. Encourage counties to integrate PLSS points

- Parcel Benchmark 4, Completion and Integration of PLSS, requires counties to complete their PLSS and integrate PLSS coordinates into a digital parcel layer.
- According to PLSS status tables in county land information plans finalized at the end of 2021, about 14 counties have a significant backlog of PLSS points to be integrated.
- In 2022 a definition for "integration" was created with feedback from county land information offices. This definition is to be included in the WLIP grant application and is defined as such:

***Integration** means the optimization of the geospatial accuracy of the digital parcel layer which improves the accuracy of where parcel boundary lines are represented on the digital parcel map. In cases where the result would be a materially significant improvement to the geospatial accuracy of the digital parcel layer, parcels have been tied to and, if necessary, adjusted geometrically to the inputted PLSS coordinates. This definition does not imply a restriction on a county's options for integration, whether it is snapping parcel boundary lines to PLSS corner coordinates one corner at a time, entirely redrawing parcel boundaries one survey township at a time, or another chosen approach. (For example, "rubber sheeting" is not required.)*

- ▶ **Action Item:** From the PLSS status table in each county's 2024 land information plan gather basic statistics on the integration status in each county.
- ▶ **Action Item:** Follow up with counties that have significant backlog to inquire why.
- ▶ **Action Item:** Consider modifying 2026 Strategic Initiative grant application so that Benchmark 4 prioritizes integration if there is a significant backlog of survey grade PLSS corner coordinates to integrate.
- ▶ **Action Item:** Gather feedback from stakeholders on any proposed change to Benchmark 4 in a 2026 WLIP grant application.

15. DOA re-inventory county links to the statewide parcel map

- According to s. 59.72(2), a county shall post parcel data in the Searchable Format on the internet. Instead of each county posting parcel data directly on the internet, counties provide parcel data in the Searchable Format (or close to this standard) to DOA, which contracts with SCO to aggregate all 72 county parcel datasets into the statewide digital parcel map database. This statewide database is made publicly available at the SCO data download webpage, www.sco.wisc.edu/parcels/data, which is also linked from GeoData@Wisconsin, a site curated by the UW-Madison Robinson Map Library.
- In 2022, county land information officers were asked to link to the statewide parcel map webpage if their county website did not already do so. Counties had discretion where to place the weblink and with what accompanying text, so as not to disrupt the structure of county websites.
- All counties voluntarily complied.
 - ▶ **Action Item:** DOA check county website links to statewide parcel map listed in 2024 county land information plan updates. For any county missing a link, ask the land information officer to create one.

16. DOA inventory grant-funded lidar datasets, request, and make available

- The repository WisconsinView likely does not have all of the lidar datasets and derivatives funded with grants that require public availability per request. This especially likely for many buy-up derivatives created after the initial dataset was created with a U.S. Geological Survey (USGS) 3D Elevation Program (3DEP) grant.
- Counties are currently drafting 2024 land information plan updates which include a section on lidar, in which counties are to list most recent lidar dataset acquired, as well as any derivatives, such as bare-earth digital terrain model (DTM), bare-earth elevation contours, bare-earth digital elevation model (DEM), digital surface model (DSM), hydro-enforced DEMs, among potential others.
 - ▶ **Action Item:** DOA/RML use 2024 land information plans to inventory grant-funded lidar datasets and derivatives not in WisconsinView, request them, and deliver them to RML to be uploaded into WisconsinView.
 - ▶ **Action Item:** Coordinate with the Geographic Information Officer on lidar hard drives and handover of other responsibilities prior to his retirement.

17. Schedule time for V11 Submission Documentation edits

- Based on the V10 Final Report recommendations, schema clarification edits for V11 could potentially occur in the following areas:
 - ESTFMKVALUE
 - SCHOOLDIST/SCHOLDISTNO
 - NETPRPTA/GRSPRPTA
 - AUXCLASS
 - STREETTYPE
- Edits to the schema can appear in or affect the [Submission Documentation](#), the [Validation Tool](#) logic, the end user schema, and the metadata for the statewide layer file geodatabase and [feature service](#).
- Another source of edits to make to the Submission Documentation is the [2024 Uniform Instructions for Land Information Plans](#), which were released in March of 2024.
- For currency and consistency across documents, updates to the Submission Documentation should be made.
 - ▶ **Action Item:** DOA review the [Uniform Instructions](#) for edits to make to:
 - (a) the Submission Documentation, and
 - (b) the 2025 WLIP grant application.
 - ▶ **Action Item:** Schedule time for WLIP grant application edits in July and August 2024.
 - ▶ **Action Item:** Schedule time for V11 Submission Documentation edits in October 2024.

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Appendix A

V10 User Feedback

ABOUT USER FEEDBACK

This V10 Final Report appendix is a compilation of comments provided by users of the **V10** Wisconsin statewide parcel layer, received via email and by way of the V10 online user feedback form. This data has been cleaned. Questions and comments dealing with technical subject matter have been omitted. Some comments have been omitted due to lack of content, or combined, in the case of multiple comments from the same user.

To view user feedback from previous years, see the Parcel_User_Feedback document, which is a compilation of feedback received since V1 (from the V9 Final Report, V8 Final Report, V7 Final Report, V6 Final Report, V5 Final Report, V4 Final Report, and, for V1-V3, the V3 Final Report).

Legend

Light red text indicates Organization/Affiliation
User responses are broken down into the following sub-groups:

STATE GOVERNMENT
FEDERAL GOVERNMENT
LOCAL GOVERNMENT
PRIVATE SECTOR
NON-PROFIT ORGANIZATIONS
EDUCATIONAL INSTITUTIONS
PRIVATE CITIZENS

Total number of responses that appear below: **323**
Date of last update: **June 24, 2025**

STATE GOVERNMENT USERS

- **Wisconsin Department of Military Affairs / Wisconsin Emergency Management / Mission Support - GIS**
USES • My agency uses the parcel data to assist local cities, villages and townships when conducting damage assessments during the recovery phase of emergency management.
My agency also uses the parcel data when verifying FEMA mitigation projects and to track acquired parcels were acquisition/demolition projects.
- **Wisconsin Department of Transportation - DBM/EDS/GIS Core**
USES • Mailing lists, public information meetings, corridor analysis and line work in project plans.
- **Wisconsin Department of Agriculture, Trade and Consumer Protection**
USES • I use it to find address contacts for produce farmland to verify if it is connected to a covered farm or is a new farm regulated under the produce safety rule.
BENEFITS • We have benefitted by connecting addresses for several farms through this tool.
- **Wisconsin Elections Commission**
USES • Checking addresses, aligning ward boundaries, checking school district assignments and looking at parcel boundaries.
BENEFITS • It is a one stop shop for all the parcels and all in the information in one place. Very helpful!
- **Wisconsin Department of Natural Resources - Aeronautics**
USES • Property ownership.
- **Wisconsin Historical Society**
USES • Mapping, research, survey.
BENEFITS • Knowing land ownership make our job so much easier.

- **Wisconsin Department of Natural Resources Waterways and Wetlands**
 USES • When the public contacts us regarding wetlands on a property and only provides the parcel number, we use this to look up lat / long coordinates to enter into our database.
 BENEFITS • We appreciate being able to find location data from a parcel number.

- **Wisconsin Department of Natural Resources - Environmental Management (EM) - WY**
 USES • Ownership investigation for land application of industrial and municipal biosolids.

- **Wisconsin DNR Forestry**
 USES • To help confirm landownership for land management purposes.
 BENEFITS • To help confirm landownership for land management purposes, and finding errors in our records.

- **Wisconsin Economic Development Corporation - Division of Strategic Investment and Evaluation**
 USES • We are currently using the data to analyze the taxable property value changes for property development projects that our organization has invested in and exploring trends in property value changes across the state.
 BENEFITS • Having this collection and standardization of parcel data statewide has saved us a huge amount of time compared to the alternative of having to find this information county by county. We appreciate very much having the parcel map for the current year to quickly look up specific cases as well being able to download the full geographic database to run through our own GIS mapping and statistical analysis. Also, having past years' data available for download has been immensely helpful.

- **Wisconsin Department of Natural Resources Air Management**
 USES • Looking up parcel IDs to locate physical addresses.

- **Department of Agriculture, Trade and Consumer Protection - Division of Animal Health - Bureau of Animal Disease Control**
 USES • Verifying addresses, locations, and owners of parcels of land on the Wisconsin statewide parcel layer to compare to Google maps to gather GPS coordinates for the parcels.
 BENEFITS • We are able to more accurately identify where an exact parcel of land in rural counties is located rather than just an address. Some of the parcels do not have a physical address as they are only fields. We use the GPS coordinates of the parcels to plot a map of different premises that have similar livestock species or animal production types in a geographical area that may be at risk of an animal disease during an outbreak.

- **Wisconsin Department of Natural Resources**
 USES • To find an estimate of property value for parcels that the DNR is considering acquiring.
 BENEFITS • This is another data source for parcel information that is helpful in acquisition planning.

- **[Anonymous]**
 USES • Review parcel data. Which municipality the parcel ties to.
 BENEFITS • Clear and accurate parcel data.

- **Wisconsin Division of Motor Vehicles - AO - CAFu (Certificate of Automotive Failure to Yield)**
 USES • Wisconsin DMV uses this to determine current owner. This is useful in Residency fraud investigations. Also, it is used to determine the type of property and building located on the property for Residency Fraud cases.

- **Wisconsin Department of Transportation**
 USES • Initial R/W [right-of-way] checks to avoid plat lookups for transportation projects.
 BENEFITS • Regular use of data to inform project decisions.

- **[Anonymous]**
 USES • Complaint tracking / triage.

- **Wisconsin Department of Natural Resources – Water Resources Management**
 USES • Help plan monitoring efforts.

- **Wisconsin Department of Justice - Bureau of Justice Information and Analysis**
 USES • Adding it to a data warehouse that the [Wisconsin] DOJ is building.

FEDERAL GOVERNMENT USERS

- **USDA Forest Service**
 USES • As a Realty Specialist with the USDA Forest Service, I routinely use this data to identify owners of parcels within the proclaimed boundaries of the Chequamegon-Nicolet NF.
 BENEFITS • This layer allows me to quickly identify the owners of parcels within the Forest boundary.

- **U.S. Fish and Wildlife Service**
USES • Developing management plans for private landowners to meet their goals.
BENEFITS • Accurate property boundaries for planning and implementing projects.

- **Federal Highway Administration – Dept of Transportation - Eastern Federal Lands Highway Division - Project Support**
USES • This statewide parcel database was used to verify and acquire property and boundary lines for a local project. Our project consist of improving access to a building across the Burlington Northern Santa Fe railroad in Lacrosse County. The data base provided accurate lines for developing the final mapping for our engineering plans.
BENEFITS • It saved us several man hours and provided another resource for future use when we have a need for more information.

- **DOI/BIA/FTT**
USES • Verify tax information and POC's.

LOCAL GOVERNMENT USERS

- **Southeastern Wisconsin Regional Planning Commission - Environmental Division**
USES • The Southeastern Wisconsin Regional Planning Commission uses the Statewide Parcel Database for various spatial assessments. For example, these data are utilized for structure flood damage estimates that are used to support the preparation of Hazard Mitigation Plans.
BENEFITS • Having the statewide database available for download is beneficial because the data for several counties is presented consistently and can be obtained from one source. We also benefit from having access to previous versions for applications that require earlier tax roll year data.

- **Outagamie County**
USES • To search for what county and township someone lives in so we can fill this information into SVRIS, the Wisconsin marriage license program.
BENEFITS • We are able to find the information we need.

- **Western Region for Economic Assistance - La Crosse County Economic Support**
USES • We use to help determine land ownership for Medicaid applications. The parcel search is particularly helpful when farmers apply and we are trying to determine if their parcels are considered connecting or not per Medicaid policy. La Crosse County use to have a link on their property tax search that would bring to a parcel map, but no more.
BENEFITS • Helps us determine eligibility for government benefits more easily. I specifically deal with Long Term Care Medicaid and assets are huge part of eligibility.

- **Stockbridge-Munsee Tribe**
USES • Up-to-date parcels.
BENEFITS • Accurate record keeping.

PRIVATE SECTOR USERS

- **Grams Mapping and GIS Services, LLC**
USES • I download county-wide tax parcel geodatabases for my GIS and Mapping business. I mainly use the tax parcels to create a study area and identify where property boundaries are. I work in many different counties throughout the state, so this is a really helpful tool and website.
BENEFITS • We benefit from this resource as it is easy to use, convenient, and the data is up to date.

- **[Anonymous]**
USES • To identify project boundaries based on parcel boundaries, identify landowners to determine public or private land and/or for appropriate project locations, land analysis.
BENEFITS • My organization is able to quickly and efficiently identify/show/select/export parcels across multiple geographies.

- **BTU Management**
USES • HVAC business. Verification of correct address format and mailing address information. Verification of owners of property for installation and billing purposes.
BENEFITS • We are able to obtain the mailing address for returned mail that was sent to a property address and not deliverable.

- **Securitel, LLC**
USES • We use it to determine municipality and county. This is needed to determine AHJ and what permits we need to get for jobs.
BENEFITS • To determine municipality without having to go into the county tax records. County websites are all different and some are difficult to find what we need.

- **[Anonymous]**
USES • We use this parcel viewer on a weekly basis to verify addresses that we plan to service. We are an internet service provider.
BENEFITS • As mentioned above, many of us use this parcel viewer to verify addresses since we are out of state and cannot see them ourselves.

- **[Anonymous]**
USES • Confirm county and municipal for registering vehicles.
BENEFITS • Register vehicles to correct county/municipality.

- **Michels Corporation**
USES • As a construction company we use ArcGIS Pro and our Enterprise Portal to effectively communicate with our employees.
BENEFITS • We are a construction company and find having access to the property owner names is extremely helpful. Historically, we would have to get new plat maps from all the counties we work in or hope to work in. We also own and operate in scores of nonmetallic mining sites. Know who the neighbors are helps us communicate with them and be good neighbors.

- **Halberg Engineering LLC**
USES • Confirming municipality and property ownership for the purpose of preparing commercial building submittals to the Wisconsin DSPS for their review and approval.
BENEFITS • County GIS sites are inconsistent across the state, and this site allows us a single source to confirm ownership data and municipality (Taxing entity) for properties throughout the state.

- **[Anonymous]**
USES • Land use planning, prioritizing sites for farmland protection or conservation.
BENEFITS • When assessing any natural features on the landscape it's critical to know the number of parcels and the number of different landowners involved.

- **Manhard Consulting - Illinois Office**
USES • Due diligence map package, internal web map for download for CAD import.
BENEFITS • I have used it for a one off map request so far but see great value in having the complete state in a single web service. We can set up base maps without having to go county by county as we do in some states. We are in the construction/development industry so parcels is one of our most common requests.

- **La Crosse Sign Group**
USES • I use it extensively for finding parcel boundaries and find other information vital to getting the proper permits needed for the projects I work on for our customers.
BENEFITS • It has already saved me weeks of time by not sending permit applications to the wrong municipalities. The post office will list the address in one town but according to the information provided by this parcel map they are actually in the village with the same name with an entirely different application process. In this way it has saved me a lot of time and by extension our company a good deal of money.

- **McMahon - Infrastructure and Environment**
USES • Creating maps and mailing data.
BENEFITS • Our organization uses parcels on a daily basis. Extremely helpful in map and data production.

- **[Anonymous]**
USES • Using it to assist with survey work.

- **Wisconsin River Bank**
USES • Great for finding overhead views of parcels and coordinates. A lot of counties don't have GIS maps so the ability to have this to ensure I am looking at the correct parcel/section of land has been invaluable. I work for a bank so using this to check collateral has been key.
BENEFITS • Being able to more easily identify parcels and building locations has been very helpful for verifying collateral for loans.

- **Bytec Resource Management**
USES • We are a food grade liquid waste hauling company. We apply these products as a fertilizer source for farmers/landowners. I use this site to locate potential parcels to reach out to when I need to broaden my acres.
BENEFITS • Saves time flipping through plat books which quickly become out of date.

- **Haas Sons, Inc.**
 USES • Construction company -- finding property owner addresses and property locations.
 BENEFITS • Time saving finding addresses for orders and actually owner billing addresses.

- **[Anonymous]**
 USES • Telecommunications network design and construction.
 BENEFITS • It allows us to identify parcel boundaries and ownership, which helps determine where to locate fiber runs, terminals, and other equipment. It's beneficial to have all the information available in one place and in the same format, rather than having to search multiple organizations with different policies on record keeping and data sharing.

- **PARE Consultants**
 USES • We use the parcels data layer to identify properties for real estate appraisal purposes.
 BENEFITS • We use it daily to locate properties for appraisals.

- **Midwest Electric - Estimator/Project Manager**
 USES • I use it every time I need to fill out a Diggers ticket. I use it to make sure I have the correct county and city listed for each property. It is also useful for filling out permits for the same information.
 BENEFITS • Saves much time and hassle trying to track down information.

- **[Anonymous]**
 USES • We would like to use the parcel data to verify our current coverage and make any necessary updates. HERE's data is visible at wego.here.com, but also powers Garmin units, many car navigation systems (such as Toyota, Ford, Mercedes), and delivery companies such as FedEx, UPS, and Amazon. Many E-911 / first responder agencies also use our maps & services. We want to make sure that everyone using our platform and services are getting correct information so we look to local agencies to help us by providing data to compare with our current coverage.

- **[Anonymous]**
 USES • To confirm that the farm I am visiting is the correct location and owner.
 BENEFITS • Makes visiting much more smooth and streamlined when I can confirm that the location is the correct one for the owner.

- **HTLF Bank**
 USES • Bank - Lending and portfolio monitoring. Preparation of land value estimates.

- **Midwest Fiber Networks - Engineering**
 USES • Developing base maps.
 BENEFITS • Knowing where owner's property is, knowing if need easement, knowing to stay 3 ft of property line when constructing.

- **Kickapoo Landing Owners Association**
 USES • To provide a Kickapoo Landing owners map for the HOA.
 BENEFITS • Keeps the HOA up to date with the owners.

- **Burns & McDonnell - Environmental Services**
 USES • Siting studies for infrastructure projects.
 BENEFITS • Access to parcel boundary information for the entire state at no cost helps with planning and analysis within GIS.

- **[Anonymous]**
 USES • Gain access to parcel ownership and boundary information in a format that can be queried and saved for use in municipal planning projects for communities or counties that do not provide this as a downloadable layer.
 BENEFITS • We can more easily load and save queries to make new layers for planning projects within municipalities that do not freely share their GIS data (or those who do not have a GIS manager on staff).

- **[Anonymous]**
 USES • To identify property lines to know by whom a scenic feature is owned so permission can be obtained to photograph the desired feature.
 BENEFITS • I cannot photograph without permission and I cannot get permission without knowing ownership. Scenic spots are not restricted to clearly government-owned sites, and, without being able to investigate property lines and owners, trying to photograph the simplest thing becomes a nightmare. So this parcel info is hugely useful in simplifying that process.

- **Midwest Solar Power**
 USES • We use the statewide parcel database to quickly identify the municipality and county for our projects. This website makes it super easy, compared to going to each individual county's GIS (if they are even

functioning). Super cool tool you have made, usually my first stop when I am determining the county/AHJ for a client's project.

BENEFITS • Yes, cuts down on time and frustration of determining AHJ/county for permitting and zoning.

▪ **Fireline Sprinkler, LLC - Design Coordinator**

USES • To verify the Municipality & Owner Information for the specific parcel information for fire sprinkler system project plan review & permit applications per AHJ requirements.

▪ **C. Viner Plumbing and Excavating**

USES • Determine land borders for hunting and fishing purposes.

BENEFITS • More accurate than phone apps.

▪ **Vierbicher**

USES • Leverage county parcel data to provide comprehensive planning services to Wisconsin municipalities in accordance with Wis. Stat. 66.1001.

BENEFITS • Reliable, updated parcel information.

▪ **Beaver Creek Archaeology**

USES • To be able to check the boundary of parcels to possibly create boundaries for cultural-historical sites.

▪ **Energy Solutions - Energy Efficiency department - Focus on Energy's Instant Discount Program**

USES • Address verification for Focus on Energy equipment claims.

BENEFITS • Able to confirm address exists and fetch owner name.

▪ **Ayres Associates - Water Resources - Eau Claire**

USES • Check ownership of land for flood study report.

BENEFITS • As a municipal and utility engineering consultant, we frequently need to see the ownership of properties near or affected by our projects.

▪ **[Anonymous]**

USES • We used this layer to inform a Real Estate Technical Memo, which outlines potential locations to that could be used in a remediation project near Milwaukee.

BENEFITS • This layer gave us the benefit of identifying property owners, extents, and parcel IDs of potential properties that could be used for the remediation project that is the subject of this tech memo.

▪ **Comfort Hills Apartments, LLC**

USES • Fill out building permit in the City of Wautoma.

▪ **KL Engineering**

USES • I have used this data for feasibility studies and for design work to get the R/W lines that I need to work within.

BENEFITS • We are able to complete Feasibility studies with the information necessary. We are able to show who owns the land and where we can build within R/W. This service has helped immensely with our design processes.

▪ **[Anonymous]**

USES • Environmental assessment maps.

▪ **[Anonymous]**

USES • Customer search and land use questions.

▪ **GridBoost**

USES • Identify sites for ground-mount and roof-mount solar.

▪ **[Anonymous]**

USES • Utility planning.

▪ **U-Haul Company of Southeastern Wisconsin**

USES • I use this service to find contact information for business owners in hopes to partner with them in the future.

BENEFITS • We benefit by being able to find a property owner and contact them directly.

▪ **Handy Art, Inc.**

USES • Plot ID for install of services.

BENEFITS • Easy ID of ownership and ID's relating to the parcel. See future value for contacting land owners.

▪ **Stapleton Group**

USES • Managed forest land.

- **InspectWlz Building Inspection Solutions, LLC**
 USES • We, InspectWlz Building inspection solutions, would like to use the Statewide Parcel database API to retrieve property data for counties/municipalities. We have software that building inspectors use to manage building permits and inspections in over 100 municipalities with the state of WI. We need a consistent way to retrieve county data for those municipalities. Since every county is different in the way they handle the data this makes it challenging to work with. Would love a way to use an API to get standardized formatting of the data.

- **Millennium - Geospatial - Telecom**
 USES • Assist with fiber design to provide better internet to Wisconsin communities.
 BENEFITS • We use this data to assist with planning and permits. Wisconsin is one of the better state at providing quality parcel data.

- **Hilbert Communications, LLC**
 USES • Tower siting.
 BENEFITS • We site towers on a statewide basis, and having a single data source is much more beneficial than individual county websites.

- **Bank of Prairie du Sac - Loan Department**
 USES • Having a clear image of parcels for a certain area. Determining ownership of the parcel. I find little consistency across counties for such a service so it is amazing to have this.
 BENEFITS • As mentioned above, it helps determine ownership and boundary lines of parcels.

- **[Anonymous]**
 USES • Confirming addresses for package recipients.
 BENEFITS • It's a way to confirm delivery addresses during hours that are unacceptable to make phone calls.

- **Northwest Hardwoods**
 USES • Creating forestry maps with Qgis and Avenza.
 BENEFITS • This data is current and precise, while also being easy to use and incorporate to Qgis.

- **LimnoTech**
 USES • Restoration site engineering - preliminary design with the City of Ashland.
 BENEFITS • Accurate Limit of Work maps, helpful for visualizing and planning/communicating.

- **TerraCarbon, LLC**
 USES • The parcel layer is being used for development of a carbon project on county land within the state. It is required by the ACR Methodology for Improved Forest Management carbon projects.
 BENEFITS • We will benefit from the use of this data layer to complete the requirements of carbon project development.

- **General Engineering Company**
 USES • Using shape files of parcel data for schematic design purposes.

- **Mach IV Engineering and Surveying/Engineering**
 USES • Initial use is for rough location of the parcel boundary that our client are developing.
 BENEFITS • Rough location of the parcel boundary that our client are developing.

- **Global Minerals Engineering**
 USES • Land use planning.
 BENEFITS • Clarifying ownership of parcels.

- **[Anonymous]**
 USES • I was using the V10 to look at any records available for a specific parcel. The address search did not come up with a result (I followed all directions), so I zoomed in to find the specific parcel. I tried clicking on the parcel and it gave the loading circle and then stopped, not giving me any results.

- **[Anonymous]**
 USES • Suitability analysis.
 BENEFITS • Data lets us run our analytics. Having centralized data sources makes our lives easier.

- **Utilitra**
 USES • As a reference layer for GIS/GPS Mapping, also for utility engineering design purposes.
 BENEFITS • As a reference layer for GIS/GPS Mapping, also for utility engineering design purposes.

- **Davel Engineering**
 USES • Some counties have less up to date and/or accessible parcel data needed for engineering planning.
 BENEFITS • Data helps fill the gaps that county data is sometimes missing.

- **Cooper Engineering**
 USES • Use in Civil3D for approximate R/W and property lines. Pull information for lanowner names.
 BENEFITS • Data can be automated within civil3D.

- **Emmons and Olivier Resources, Inc**
 USES • Use regularly for analyzing properties that we have been contracted to do hydrologic analyses on, identifying flood prone properties or those affected by a mapping change, etc.
 BENEFITS • Hard to imagine working without it.

- **Geocodio**
 USES • We are using the statewide Wisconsin parcel layer as one of our sources for geocoding addresses.
 BENEFITS • The statewide parcel layer allows us to improve our geocoding accuracy and coverage in Wisconsin. Geocodio is used by several Wisconsin government branches, non-profit, for-profit and educational organizations.

- **[Anonymous]**
 USES • Engineering drawings for department of administration clients.
 BENEFITS • Fast access to property boundaries used to show restricted areas to contractors.

- **[Anonymous]**
 USES • As a GIS analyst, I use the statewide parcel layer very often for mapping purposes. These maps include DOT historic property submissions, asset mapping for municipalities, and public-facing applications.

- **Insurezone.com of Texas Underwriting**
 USES • Confirm home information to provide accurate insurance quotes for the clients.
 BENEFITS • Confirm home information to provide accurate insurance quotes for the clients.

- **[Anonymous]**
 USES • Property Iron searches and mailing.
 BENEFITS • Helps us with Mailing and property iron searches.

- **BTU Management Inc**
 USES • Verify correct addresses. Verify correct mailing addresses. Verify correct property owners. Verify county of property.
 BENEFITS • For all of the above uses.

- **Parkview Properties**
 USES • To verify home ownership for future tenants in our business.

- **First Community Bank - Loan Department**
 USES • I use this to reach out to farmers and see if they need any financial consulting/advice.
 BENEFITS • We have had many farmers reach back to us seeing if our services benefit them.

- **[Anonymous]**
 USES • To see AHJ of our customer's property, no other way to know where to file permits. Also to find boundaries of properties.
 BENEFITS • Happier customers, quicker permitting (useful info).

- **[Anonymous]**
 USES • DNR permits.
 BENEFITS • Ability to print maps with parcel data easily.

- **[Anonymous]**
 USES • Making Landscape Architecture plans based off of parcel data.
 BENEFITS • These are the most up to date parcels and allows us to have a better view of the places we will be working.

- **Unity Land LLC**
 USES • Identify land parcels for potential purchase/investment.

- **Krause Funeral Home - Medical Liason**
 USES • I use this to verify addresses for death certificates. Families don't always verify if Ave/St/etc should be listed, or know what county an address is in.
 BENEFITS • This has saved us from amending and reprinting death certificates, saving families time and our company money.

- **[Anonymous]**
 USES • Verify address and jurisdiction/township.
 BENEFITS • Accuracy of information.

- **Straka Johnson Architects**
 USES • Help identify land parcel of client.

- **Hiawatha Broadband Communications Including - Winona MN - Outside Plant Engineering**
 USES • I use the parcel data as a base layer for planning and design of fiber optic networks.
 BENEFITS • From a design perspective using the parcel layer within GIS design tools allows for informed decisions for infrastructure placement, routes, and route extents. For customer service and FCC reporting purposes the data is very helpful for standardizing addresses. It is a good base layer to overlay the FCC Broadband Data Fabric to identify and address discrepancies between the data sets used for reporting.

- **Black & Veatch, Infrastructure Advisory, Delivery Team**
 USES • We are using the Statewide Parcel Database to create appendices for a "Certificate of Authority to Construct..." for one of our clients. The parcels are used on several figures to communicate where the project is and what features surround it (environmental, cultural, etc.)
 BENEFITS • We often work with clients to perform engineering design and/or environmental studies. Parcel bounds and metadata are critical for us being able to offer these services.

- **[Anonymous]**
 USES • Creating a comparative market analysis for the land in order to have a better idea what to offer for it.
 BENEFITS • Gives us that parcel's FMV and all the parcels around it.

- **MSA Professional Services**
 USES • Streaming the parcel REST endpoint for cities who have their own GIS but the county data is inaccessible via REST.
 BENEFITS • We can stream parcel data to ArcGIS Online maps where it may be locked by a third party.

- **[Anonymous]**
 USES • Looking for a zip code area and adjacent zip codes.
 BENEFITS • I was looking for a specific zip code area and adjacent zip codes for service determination.

- **Anonymous Internet Service Provider**
 USES • This website helps us (Internet Service Provider) to identify who/where we are supplying services. Typically used for prospect customers in our case.
 BENEFITS • Helped us in a few cases; one being to classify prospect customers as business/residential.

- **Eagle Point Solar**
 USES • We are a design/construction company that use the parcel layer as one way to confirm land ownership, parcel lines, and identification of the local authorities to ensure that we meet local requirements.
 BENEFITS • By confirming land ownership and local jurisdiction (and townships), projects are completed more efficiently and with higher confidence. This prevents problems (such as permitting or inspection failures, or adjustments within the field) which would be problematic for our Wisconsin customers.

- **Forestry Consulting**
 USES • QGIS.
 BENEFITS • Easy access to parcel numbers and landowner identification info for MFL mapping and applications.

- **Midwest Solar Power**
 USES • We use this tool to quickly identify what municipality and county a client is located in so we can reach out to the proper AHJ for permitting and such. This tool is super useful because many counties' parcel websites are either difficult to use or sometimes not operational for months at a time. Overall this is a very good tool and I like it. Fastest way to determine AHJ/County since it is all condensed into this one place.
 BENEFITS • It speeds up the time it takes to determine the AHJ/County of a site and also reduces the frustration of navigating to (often non-functioning) multiple county parcel websites trying to determine what AHJ/County a property belongs to.

- **LundinTree**
 USES • Scheduling and coordinating services to property owners.
 BENEFITS • We are able to preplan our arrival without conflicting with the many parking restrictions in Madison.

- **NPNUSA**
 USES • We used to use your statewide parcel data to aggregate into a national parcel layer . . . National parcel layer data integrator.
 BENEFITS • Contributed to a national parcel layer.

- **Frontier Com**
 USES • Wanted to find a telcom building address.

NON-PROFIT USERS

- **Maleline Island Wilderness Preserve**

USES • We are a local land-trust on Madeline Island. Land ownership information is important to our programs.

BENEFITS • Mapping our own land holdings and exploring acquisition of other parcels.

- **Lenzen Research**

USES • Local individual sites.

- **Gathering Waters: Wisconsin's Alliance for Land Trusts**

USES • I utilize the Statewide Parcel Database to delineate the boundaries of the state's protected natural areas, both those that are owned outright by a public or private conservation entity as well as those protected in whole or part via an easement.

BENEFITS • The database is the foundation of much of my geospatial work. Acknowledging that the delineated parcels are not survey-level accurate nor are they meant to be, they are still almost universally highly precise (1-2 meters), such that the protected natural lands database that I've created and maintain rests atop the Statewide Parcel Database. Separate but no less important, absent this resource, I would need gather parcel data from individual counties. That would be not only time consuming and expensive, but also temporally limiting, as it would not be practical to purchase new data for each county every year.

- **Gathering Waters: Wisconsin's Alliance for Land Trusts**

USES • We use the parcel layer as the foundation of a GIS planning tool for WI's land trusts that help them evaluate potential conservation purchases as well as land management activities on their property.

BENEFITS • The parcel layer facilitates communication with landowners about conservation opportunities on their properties. It helps WI land trusts plan for potential conservation purchases. Evaluating ownership patterns also helps land trusts better understand land use across WI. The parcel layer is invaluable to our work.

- **Ice Age Trail Alliance**

USES • The parcel data is essential to the work I do. Our organization uses it to ensure we have the correct contact information for the landowners in our service areas.

BENEFITS • We use it to populate all of our arcGIS mapping services.

- **Ice Age Trail Alliance**

USES • We use the statewide parcel data to check for ownership changes under the Ice Age Trail and for planning for the Ice Age Trail route.

BENEFITS • It is much more efficient to use one statewide parcel layer than to work with multiple county parcel layers for the 30 counties that the Ice Age Trail traverses. I also appreciate the updated database using the same REST endpoint as the previous database.

- **Trinity Freistadt Historical Society**

USES • Preparing exhibit for local historical society on surveying and land use.

BENEFITS • The display will show changes over time, and this is up-to-date.

- **Wisconsin Mycological Society**

USES • Using for finding public land for mushroom hunting.

- **St. John's Evangelical Lutheran Church**

USES • We received a suspicious offer to buy a parcel of land supposedly belonging to our church and I wanted to look up the parcel ID to see if it was legitimate. The land did not even belong to us, so I'm glad I was able to look it up.

- **[Anonymous]**

USES • Historic research .

- **[Anonymous]**

USES • See how titled.

- **Twin Lakes Preservation Association**

USES • I'm on the board of my lake association, representing three lakes in Washburn County. Having this resource helps us keep track of who the property owners are on these lakes for purposes of communication. As a private citizen who has a vacation cabin on one of those lakes, it's helpful for me to see who my neighbors are and get to know one another better.

- **Cochrane Cooperative Telephone Company**

USES • We use this as a cross refence to update parcels to current landowners. This is important for us as to ensure that we know who the current property owners are.

BENEFITS • Our county's system was previously used; however, they transitioned to another software service and we can no longer run a report of this data. This is the easiest way for us to obtain this data with out doing a records request.

EDUCATIONAL INSTITUTION USERS

- **University of Wisconsin-Madison**

USES • Land use calculations.

BENEFITS • The land use for the state is not present. Property class is not very helpful and seems to not be accurate and is missing for many parcels. For example the Epic area is mapped as partly agriculture. I was able to use the Dane county layer to get a better idea of area subdivided but vacant and was hoping to get this for the state, but the other counties of interest I have check do not have it.

- **Bay City Baptist Church**

USES • Verify addresses and school districts.

BENEFITS • It helps us in verification of information for the Parental School Choice Program.

- **St. Peter Lutheran School**

USES • School district determination.

BENEFITS • We use it to prove what district students are in.

- **[Anonymous]**

USES • Verifying student addresses.

BENEFITS • Gives me public school district name for our private school.

- **School District of Lomira**

USES • Taxes, land, and future developments. It came in very beneficial as we entered a boundary dispute with a neighboring district.

- **[Anonymous]**

USES • Teaching surveying (where to find legal documentation).

- **Eastern Washington University**

USES • Economic geography research.

BENEFITS • Yes, from the richness of the data including valuation.

- **Water Resource Management Program / Center for Limnology - University of Wisconsin- Madison**

USES • I am going to use the parcel data to write a research paper about human influence on lakes in Vilas County.

BENEFITS • I am in a graduate program that will likely continue to use parcel data in the future!

- **University School of Milwaukee**

USES • To aid in the campus habitat development – to plan and rid the property of invasive species like buckthorn, teasel, honeysuckle and thistle and reestablish native habitats on the 130-acre campus.

- **Trinity Lutheran School**

USES • Confirming school district information of parents.

- **Wisconsin State Cartographer's Office**

USES • Determine parcels containing lands suitable for conservation.

BENEFITS • The state of WI can spend its grant funds more effectively.

- **[Anonymous]**

USES • We are an ecology lab that builds interactive web applications to monitor, predict, and track invasive species spread and establishment. We plan to use this parcel data intersected with 1km grid of WI to highlight areas where anonymized surveys of this invasive species have been found.

- **Department of Soil and Environmental Sciences - University of Wisconsin - Madison**

USES • Use for reporting purposes in SnapPlus, specifically to help county conservation departments identify eligible landowners for farmland preservation tax credits.

BENEFITS • Without the statewide parcel layer, it would be more difficult to verify landowner participation in farmland preservation. Instead of using a statewide application to quickly export parcel information, county conservation departments would be forced to develop their own methods. This would likely add an additional burden to local governments.

- **New Lutheran High School**
 USES • (Also, a non-profit organization.)
 We are a high school and we use this program to verify addresses for the State Voucher program and their requirements.
 BENEFITS • Our students are accepted into the voucher program—much needed tuition relief for many families—thank you!

- **Waupaca Christian Academy - School Choice Administrator**
 USES • It is necessary for School Choice Administrators and Designees to verify school district information for School Choice Applications.
 BENEFITS • This is the most comprehensive site available to verify school district information for school choice applications. This is a required verification from the State DPI and it would be very difficult to complete these verifications without the statewide parcel map.

- **Fox Valley Lutheran High School - Administrative Assistant – Wisconsin Parental Choice Program (WPCP) Designee**
 USES • Verification of school district for WPCP applications.
 BENEFITS • I am able to use this site for 90% of my school district verifications. Using one site enables me to have consistency with paperwork across the board.

- **Fox Valley Lutheran High School**
 USES • SNSP (Special Needs Scholarship Program).

- **[Anonymous]**
 USES • To verify what school districts residents fall into for the purpose of the Wisconsin Parental Choice program.
 BENEFITS • We use the parcel maps as a tool to verify which school districts our students live in. This is a requirement of applying for the Wisconsin Choice program and awarding vouchers.

- **[Anonymous]**
 USES • Thanks for making this data available. I used the parcel data to identify manufactured/mobile home parks across the state of Wisconsin. It would be great if other states could follow your lead.

- **University of Illinois Urbana-Champaign**
 USES • I am a PhD student at the University of Illinois Urbana-Champaign. We are permitted to trap whip-poor-wills across a huge set of land owners, but it is challenging in the field (at night) to know who owns what land. I am downloading these maps to help provide quick reference in our existing Field Maps app (Arcgis product), so we know whether we are permitted for parcels or not.
 BENEFITS • Provides a lot more clarity on ownership than having to track down vague pdfs from different agencies. I predict it'll be more useful than just this as well.

- **[Anonymous]**
 USES • Student address verification.

PRIVATE CITIZEN USERS

- **Private Citizen**
 USES • Identify property markers so I can put in a shed.
 BENEFITS • Will know if they approve my permit.

- **Private Citizen**
 USES • Finding rock quarries.
 BENEFITS • I am able to find possible sources for local building stone. Then I can contact the land owner and work out a deal.

- **Private Citizen**
 USES • Look for parcel boundaries, ownership, type of habitat and size of parcel.
 BENEFITS • I have been using a GIS parcel viewer for years with great success . . .

- **Private Citizen**
 USES • Find relatives.

- **Private Citizen**
 USES • Primary use has been research for selling and buying our existing and new homes.
 BENEFITS • . . . The system has been invaluable in the past. Having purchased a home in a different county only yesterday, I'm probably nearing the end of my use of your system. It has been an incredible tool . . .

- **Private Citizen**
USES • Property ownership.

- **Private Citizen**
USES • To determine ownership of trees that are threatening to fall in/on property, driveways and transformer box.
BENEFITS • I benefited because I know that the problem trees are not mine. But We Energies and Asplundh won't address the threat until trees fall. 4 different staff, 2 at each, say same. So, I'm looking into generator.

- **Private Citizen**
USES • Property ownership.

- **Private Citizen**
USES • Looking for aerial views of farm property owned by my mother.

- **Private Citizen**
USES • Buying land.

- **Private Citizen**
USES • Funding my friend's land up north.
BENEFITS • We get good starting information to use when researching parcel information when considering a purchase.

- **Private Citizen**
USES • Checking a property.

- **Private Citizen**
USES • I am a frequent user of the parcel map web page. I use this for personal research as well as in my citizen interactions with our local township zoning boards. It is very helpful to have a current parcel map with related owner information and I am glad and grateful that this exists.

- **Private Citizen**
USES • I am also a property owner with my husband and I am not listed, I would like to be . . .

- **Private Citizen**
USES • Buy land.

- **Private Citizen**
USES • I am interested in creating road scavenger hunts for genealogists and for GPS enthusiasts as a way to bring more, fun events to central Wisconsin to draw tourists to small communities.

- **Private Citizen**
USES • To find out if I'm on private and or not.

- **Private Citizen**
USES • Verifying parcels of land for potential purchase.
BENEFITS • Verifying parcels of land for potential purchase.

- **Private Citizen**
USES • Lot lines, size of lot, actual owners names of land parcels.
BENEFITS • It has helped me as a new owner of a piece of property in northern Wisconsin.

- **Private Citizen**
USES • I use it to learn who owns a parcel. Mainly out of curiosity.

- **Private Citizen**
USES • Wanted to buy property and check the property lines.

- **Private Citizen**
USES • Determine land value of available property.

- **Private Citizen**
USES • Information as to names of neighbors [irrevokable trust].

- **Private Citizen**
USES • Learning new area.

- **Private Citizen**
USES • Viewing property boundaries, estimated property taxes, and ownership when researching land to buy.
BENEFITS • Seeing property tax values is very beneficial, and total assessed acres is beneficial as well.

- **Private Citizen**
USES • Parcel owners.

- **Private Citizen**
USES • Map of parcel.
BENEFITS • May sell property.

- **Private Citizen**
USES • Locating lost cousins and school friends from years ago.
BENEFITS • I have found my cousins and my best friend from elementary school.

- **Private Citizen**
USES • I use it to confirm home ownership. I work as an insurance sales person.
BENEFITS • Confirm physical and mailing addresses.

- **Private Citizen**
USES • Getting an idea of my property line before having a survey to build a back yard fence. I know I need to call 811 as well.

- **Private Citizen**
USES • I needed mail addresses for specific properties.

- **Private Citizen**
USES • Wanted to look up data on property I was possibly interested in purchasing . . .

- **Private Citizen**
USES • To determine the zoning of a parcel, to see if it is suitable for a new seasonal, commercial retail business location.

- **Private Citizen**
USES • Searching to verify who is listed as the legal owner of a property.

- **Private Citizen**
USES • Looking for ownership of parcels that I'm interested in developing.
BENEFITS • Makes discovering this info more easy.

- **Private Citizen**
USES • Owner search of parcels.

- **Private Citizen**
USES • I'm using the parcel layer for fiction writing, It's extremely important for states to keep this kind of data for people to remember what the past was like.

- **Private Citizen**
USES • Running route.

- **Private Citizen**
USES • Finding public property in Madison area.
BENEFITS • Found public property.

- **Private Citizen**
USES • Identified property owner in order to request access to pick blackberries. Then got interested in relatives lands (including my own, lol). One property even showed recent improvement that was not available on public mapping apps (Apple, Google) . . . nice!
BENEFITS • Only knowing who owned land 10-20 years ago can make getting access permission difficult now that nearly everyone has only cell phones. Having the owner's name makes it much easier learning their preferred contact method.

- **Private Citizen**
USES • To see lot lines for a potential house purchase!
BENEFITS • It is helpful to see where yards start/end through trees and brush.

- **Private Citizen**
USES • I use to evaluate potential properties for sale, compare tax bills, etc.
BENEFITS • Without information provided here we likely would call local offices and consume the valuable time of the people there to obtain the information we can find here.

- **Private Citizen**
 USES • Looking at parcels that are for sale. Finding locations of people we know. Seeing property lines. Interesting just searching properties to see who may live there. Ease of use. Great site!
 BENEFITS • Comparing prices and taxes of comparable properties.

- **Private Citizen**
 USES • Aid in deciding how to divide our current parcel.

- **Private Citizen**
 USES • To determine waterfront footage of several properties on Legend Lake.

- **Private Citizen**
 USES • To check parcel number for tax record.
 BENEFITS • Easy to get tax record through parcel ID.

- **Private Citizen**
 USES • Used for my real estate holdings and also neighbors.
 BENEFITS • Useful information regarding taxes location ownership and to identify ha numbers.

- **Private Citizen**
 USES • Landowner search.
 BENEFITS • Yes. It's quick and easy.

- **Private Citizen**
 USES • Finding who to contact for goose hunting season.
 BENEFITS • I find places to hunt.

- **Private Citizen**
 USES • Determine land boundaries for property owned, and purchasing, and for development.
 BENEFITS • Determined boundaries of property purchased.

- **Private Citizen**
 USES • This time I used it to find the address of the person I wanted to send a sympathy card to. I also use plat maps when working on my family history project.

- **Private Citizen**
 USES • An art project to describe the approximate area of the Brule River a great mounted rainbow trout was caught by my beloved brother.
 BENEFITS • It gave me a printed area of where my beloved brother shot the black bear he gifted me.

- **Private Citizen**
 USES • See who in the family is monopolizing uncle inheritance!

- **Private Citizen**
 USES • Finding locations of family farms.
 BENEFITS • Having one place to go for multiple county data.

- **Private Citizen**
 USES • Property lines.
 BENEFITS • Future land use.

- **Private Citizen**
 USES • Leverage parcel data to filter for potential real estate investment opportunities that align with my strategy.
 BENEFITS • Developed program to plot State of Wisconsin map, color coded (heatmapped) parcels based on characteristics that improve attractiveness of investment to identify general areas that warrants further exploration.

- **Private Citizen**
 USES • Hunting/ knowledge of whose land is near public land in case a wounded animal crosses property lines.

- **Private Citizen**
 USES • Used in conjunction with other information for possible real estate purchase.

- **Private Citizen**
 USES • Looking to verify property line.

- **Private Citizen**
 USES • Personal use only.

- **Private Citizen**
USES • My neighbor keeps pushing her land limits.

- **Private Citizen**
USES • Interested in property ownership.

- **Private Citizen**
USES • Personal use.

- **Private Citizen**
USES • Compare assessments.
BENEFITS • All needed data in one spot.

- **Private Citizen**
USES • Check out my property, compare to surrounding area for value, taxes, and so forth.

- **Private Citizen**
USES • Parcel ownership.

- **Private Citizen**
USES • Find owner to request permission to access land related to hunting and retrieve track deer.
BENEFITS • Located owner.

- **Private Citizen**
USES • Find lot line corners.

- **Private Citizen**
USES • Complete tax return.

- **Private Citizen**
USES • Determine parcel boundaries.
BENEFITS • Determine if taxes paid.

- **Private Citizen**
USES • Legal research.

- **Private Citizen**
USES • Getting a better idea of what property houses for sale have, often times they do not make it clear!
BENEFITS • Much more informed purchases.

- **Private Citizen**
USES • Will use for personal reference to real estate parcels I own.

- **Private Citizen**
USES • To determine year of title transfer.
BENEFITS • Will or trust data input.

- **Private Citizen**
USES • Hunt.

- **Private Citizen**
USES • Personal tax records and property lines.

- **Private Citizen**
USES • I used this to look at land owned by me and my extended family (all live close together) for total acreage; also to look at lake access.
BENEFITS • Handy information, easy to read, easy to print.

- **Private Citizen**
USES • Not sure - checking to see what it has listed to view.

- **Private Citizen**
USES • I hunt Jackson County Forest land. There is private land adjacent to where I hunt. I always recheck property lines to make sure I am far enough away from that property line. Thank you.

- **Private Citizen**
USES • I am looking at property lines to put up signs on dad's property. The property lines are not correct on the sight. They are one lot off and stating that his neighbor now owns his property. This is not true.

- **Private Citizen**
USES • Hunting.

- **Private Citizen**
USES • Identifying parcels owned by family, parcel identified as MFL, and natural boundaries.
BENEFITS • Identify tax parcels and parcels to determine open or closed hunting lands in accordance with Wisconsin's Managed Forest Law.

- **Private Citizen**
USES • Contacting landowners for permission to pick hickory nuts.

- **Private Citizen**
USES • Buy land.

- **Private Citizen**
USES • My father passed and we are trying to figure out property lines.
BENEFITS • We were able to see property lines.

- **Private Citizen**
USES • To find public land for hunting, fishing and camping.

- **Private Citizen**
USES • Looking to see what is around parcels, who owns them.

- **Private Citizen**
USES • Finding general property boundaries, learning who my neighbors are.
BENEFITS • I have terrible memory so it's helped me remember the names of my neighbors.

- **Private Citizen**
USES • Looking for owners.

- **Private Citizen**
USES • Confirm legal description of my personal property for contractual purposes.
BENEFITS • Able to confirm boundaries, contiguous neighbors, legal descriptions.

- **Private Citizen**
USES • Verify easement.

- **Private Citizen**
USES • I am pursuing a certificate in GIS at a community college. I am interviewing people around Wisconsin about what is important to them about their communities and basing my GIS information gathering and analyses on what people say they are proud of, what worries them, and what they most want to see improved.
BENEFITS • The parcel data is immediately helpful in answering some questions that came up in the first interviews that I conducted. People discussed the pros and cons of large lot sizes. Zoning and building codes came up. This data provides triangulation among what community members said, state and local building codes, and actual lot sizes.
I plan on merging this data with other data, such as US Census data, which I should be able to do through their address matching service. I love that school district is in the data since I can merge it with National Center for Education Statistics data using the *SCHOOLDI_1* variable for an easy deterministic match.

- **Private Citizen**
USES • Available public hunting and fishing.

- **Private Citizen**
USES • Finding property lines.

- **Private Citizen**
USES • Looking for metes and bounds description of property.

- **Private Citizen**
USES • For a near rough estimation of parcel boundaries for hunting, and "take" retrieval purposes.
BENEFITS • Consideration of safety for neighboring owner(s) and visiting person(s), as well as their property, and pet(s). Also wild game retrieval.

- **Private Citizen**
 USES • Hiking, foraging, historical research.
 BENEFITS • I avoid trespassing, get to find new areas to hike and forage in, and help my local Historical Society pinpoint areas of interest.

- **Private Citizen**
 USES • Find name & address of property owner for purpose of discussing purchase of property. Find information about owner to learn which homes are owner occupied in my neighborhood.

- **Private Citizen**
 USES • Property search.

- **Private Citizen**
 USES • Lot line.

- **Private Citizen**
 USES • Research home I'm interested in buying.
 BENEFITS • Better knowledge of a property before purchase.

- **Private Citizen**
 USES • Searching for properties that belong to relatives that have passed away.

- **Private Citizen**
 USES • Trying to figure out if our property taxes are fair and equitable.
 BENEFITS • Analyze data.

- **Private Citizen**
 USES • Using it for buying timber looking at aerial photos and getting parcel information.
 BENEFITS • Being able to get parcel information.

- **Private Citizen**
 USES • Personal use.

- **Private Citizen**
 USES • I use it when I am looking for property . . . I can see what the actual assessed value is.

- **Private Citizen**
 USES • To find what parcel someone was trying to buy.

- **Private Citizen**
 USES • Tried to use to see if land for sale was labeled as a wetland or not.

- **Private Citizen**
 USES • Property valuation.

- **Private Citizen**
 USES • [Find] what is the actual address of my parcel. Chippewa County #[parcel ID number].

- **Private Citizen**
 USES • Checking park boundaries and river access.

- **Private Citizen**
 USES • Building fences.

- **Private Citizen**
 USES • Personal real estate searching for possible purchase.

- **Private Citizen**
 USES • Try to find lake access.

- **Private Citizen**
 USES • Private consultant working on land development/engineering.

- **Private Citizen**
 USES • Writing a legal land description for each parcel of [a] revokable trust.

- **Private Citizen**
USES • Land hunting.

- **Private Citizen**
USES • Determine property lines.

- **Private Citizen**
USES • Real estate.

- **Private Citizen**
USES • To confirm the formal name of my trust.

- **Private Citizen**
USES • Find landowner info.
BENEFITS • Wealth of information needed.

- **Private Citizen**
USES • Genealogy.
BENEFITS • Easily locate parcel ID to begin a deed search.

- **Private Citizen**
USES • Ownership.

- **Private Citizen**
USES • Personal information.

- **Private Citizen**
USES • Help in georeferencing Sanborn maps using parcel boundaries.

- **Private Citizen**
USES • General understanding of who owns the land around me. Estimate of where property lines are. Additional help for property lines in regards to hunting, and who to contact if needing to track game over lines.
BENEFITS • Previously noticed that a local municipality had the wrong parcel number associated with the wrong owner and was able to get it updated.

- **Private Citizen**
USES • Find land owner to obtain permission to hunt/fish land.
BENEFITS • Have obtained permission in the past, sometimes permission not given. Keeps me from inadvertent trespass.

- **Private Citizen**
USES • Checking property lines, compare to historical maps/data, land management planning (including for prescribed burn, forest management, and ag planning), remembering neighbor's names, a resource for artistic projects, connecting with the land, using as reference when looking at ancestors' diaries/notes, resource in a project concerning rentals and landlords, construction planning, pure interest in maps and mapping, and honestly so much more.

- **Private Citizen**
USES • Viewing boundaries of our property.
BENEFITS • Helped clarify land boundaries.

- **Private Citizen**
USES • Find ownership.

- **Private Citizen**
USES • I found some diamond willow trees. I want to find out who owns lands so I can see if I can cut some of them.

- **Private Citizen**
USES • To identify privately owned lands in the Chequamegon National Forest.

- **Private Citizen**
USES • Informational.

- **Private Citizen**
USES • Finding out about neighbors, zoning, taxes, other information about land we are considering buying.
BENEFITS • Without this resource we would not be able to make informed decisions.

- **Private Citizen**
USES • To check my own property information and the parcels near me.

- **Private Citizen**
USES • To make sure I won't go on the nabors property.

- **Private Citizen**
USES • Historical ecological data.

- **Private Citizen**
USES • Trying to find properties . . .

- **Private Citizen**
USES • Addresses for funeral thank you cards.

- **Private Citizen**
USES • This is super nice to use it for finding out owner's names and mailing addresses. Also really nice to see the property lines for hiking.
BENEFITS • Finding addresses and owner names.

- **Private Citizen**
USES • Land ownership research for the primary purpose of outdoor sporting and cross referencing data provided by other services. Also, being noseey.
BENEFITS • Having an impartial and unbiased source that is respected and reliable is invaluable when cross referencing data provided by "for profit" services. Without access to accurate data it becomes impossible to verify the validity and value of these services. This applies to everything from outdoor sporting apps, to realty apps, to trespassing prevention services. I've personally used information from Wisconsin Parcel Maps to defend myself against criminal charges. I highly doubt a third party service would have sufficed.

- **Private Citizen**
USES • Confirm official property description.
BENEFITS • Very easy to find / confirm information.

- **Private Citizen**
USES • Property ownership.
BENEFITS • Locate and contact principals.

- **Private Citizen**
USES • Just out of curiosity.

- **Private Citizen**
USES • To find and verify parcel of land listed under a trust.
BENEFITS • Used previous version of parcel map.

- **Private Citizen**
USES • Better view of land listed for sale.

- **Private Citizen**
USES • Just trying to verify where specific property lines are.
BENEFITS • Yes, makes it convenient to get information I feel like every citizen should have access to.

- **Private Citizen**
USES • Working on permit for accessory building.

- **Private Citizen**
USES • To see who property owners are on plots of land.
BENEFITS • Knowing who to approach with questions on land parcels, as well as seeing assessed values.

- **Private Citizen**
USES • Research a prospective purchase.

- **Private Citizen**
USES • To see where my property lines (estimate).

- **Private Citizen**
USES • HELOC [Home Equity Line of Credit] records.

- **Private Citizen**
USES • Looking at properties for deer hunting if it is close to public DNR land.

- **Private Citizen**
USES • I'm using it to write letters to landowners asking if they would sell me some of their land.
BENEFITS • It has been indispensable in learning the cost of land and which areas might be suitable for me to purchase from.

- **Private Citizen**
USES • Used it to verify rough location of property lines relative to neighbors.
BENEFITS • Gave me what I needed.

- **Private Citizen**
USES • I want to know what counties are around my county, so I can understand the weather alerts, which list counties.
BENEFITS • I was able to see where I live and what the names of the counties around me are. Now when the weather alert lists the applicable counties, I know if the storm is north of me or west of me or east of me.

- **Private Citizen**
USES • Look up family parcel.

- **Private Citizen**
USES • Purchasing a home.

- **Private Citizen**
USES • Personal info.

- **Private Citizen**
USES • Looking at property for sale.

- **Private Citizen**
USES • Searching parcel info.

- **Private Citizen**
USES • Parcel map for fencing plans.
BENEFITS • Picturing property lines.

- **Private Citizen**
USES • I use it to get my parcel number to pay taxes. Very helpful.

- **Private Citizen**
USES • Understanding property lines.

- **Private Citizen**
USES • Personal use.

- **Private Citizen**
USES • Property search information when considering purchase.
BENEFITS • I have been able find physical addresses for listings and the satellite views have been informative as have altitudes.

- **Private Citizen**
USES • Property search to purchase.

- **Private Citizen**
USES • Personal info.

- **Private Citizen**
USES • Want to know where the boundaries of my property sit.

- **Private Citizen**
USES • Research property for purchase.
BENEFITS • Seeing parcel lines.

- **Private Citizen**
USES • Identifying the property I am intending to purchase. Making offer on land. Locating the boundaries of the land I own.
BENEFITS • Being able to find, identify, and describe the boundaries of the land for potential purchase.

- Private Citizen

USES • Seeing who owns specific parcels.

BENEFITS • Curiosity satisfied!

- Private Citizen

USES • To access and view property in the area and/or pay local taxes.

- Private Citizen

USES • My own property information.

