BAS Municipal Ward Collection Documentation Tool

WISCONSIN STATE LEGISLATURE
LEGISLATIVE TECHNOLOGY SERVICES BUREAU - GIS

JUNE 2022

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Version: 3.1104.15

Table of Contents

Welcome to WISE-Decade 3
Login to WISE-Decade 2.0 Website 4
WISE-Decade 2.0 Dashboard 5
Uploading Data into the System 6
Shapefile (.shp) Requirements 6
Uploading Ward Data 7
Getting Ready to Document Data within the System 9
Documenting Data within the System 9
Navigate Change Polygons 10
Document Selected Record 12
Wisconsin Dept. of Administration (DOA) Municipal Data System (MDS) Integration 13
Documentation Exceptions 14
Finished with All Documentation and Submit 15
LTSB Contact Information 15

Welcome to WISE-Decade

What is WISE-Decade?

WISE-Decade is a suite of mapping tools that assist counties and municipalities with legislative and legal requirements mandated by Wisconsin state statutes. These applications help streamline and simplify the required processes such as local redistricting and U.S. Census data program participation.

What is the Boundary Annexation Survey (BAS)?

The U.S. Census Bureau conducts the Boundary and Annexation Survey (BAS) annually to collect information about selected legally defined geographic areas. BAS is used to update information about the legal boundaries and names of all governments. Each year, all functioning legal government are surveyed.

The Census Bureau uses the boundaries collected in BAS to tabulate data for various censuses and surveys including the decennial census, American Community Survey, and Population Estimates Program. It also uses the legal boundaries collected through BAS to support several other programs such as Congressional and State Legislative redistricting, the Economic Census, the Geographic Update Population Certification Program, and the Special Census program. For additional information, see the BAS Methodology page.

What is a State BAS Agreement?

The purpose of the BAS agreements is to coordinate information sharing and resources between the Census Bureau and state and county governments in collecting boundary information. Through these agreements with state and county governments, the Census Bureau aims to reduce the duplication of effort across the various levels of government as well as the cost burden associated with the annual BAS.

Wisconsin participates in a State BAS Agreement. By law, all local governments are required to report all boundary changes to a state agency, which in Wisconsin's case is the Legislative Technology Services Bureau (LTSB). LTSB reports boundary changes for all incorporated places, minor civil divisions (MCDs) if applicable, and counties within Wisconsin to the annual BAS.

The Census Bureau will still send information to the Highest Elected Official (HEO) within each jurisdiction. If there are any legal boundary changes missing, the HEO is encouraged to reach out to their respective County Land Information Office to include that update within their next State BAS submission.

What does the BAS Data Collection Application do?

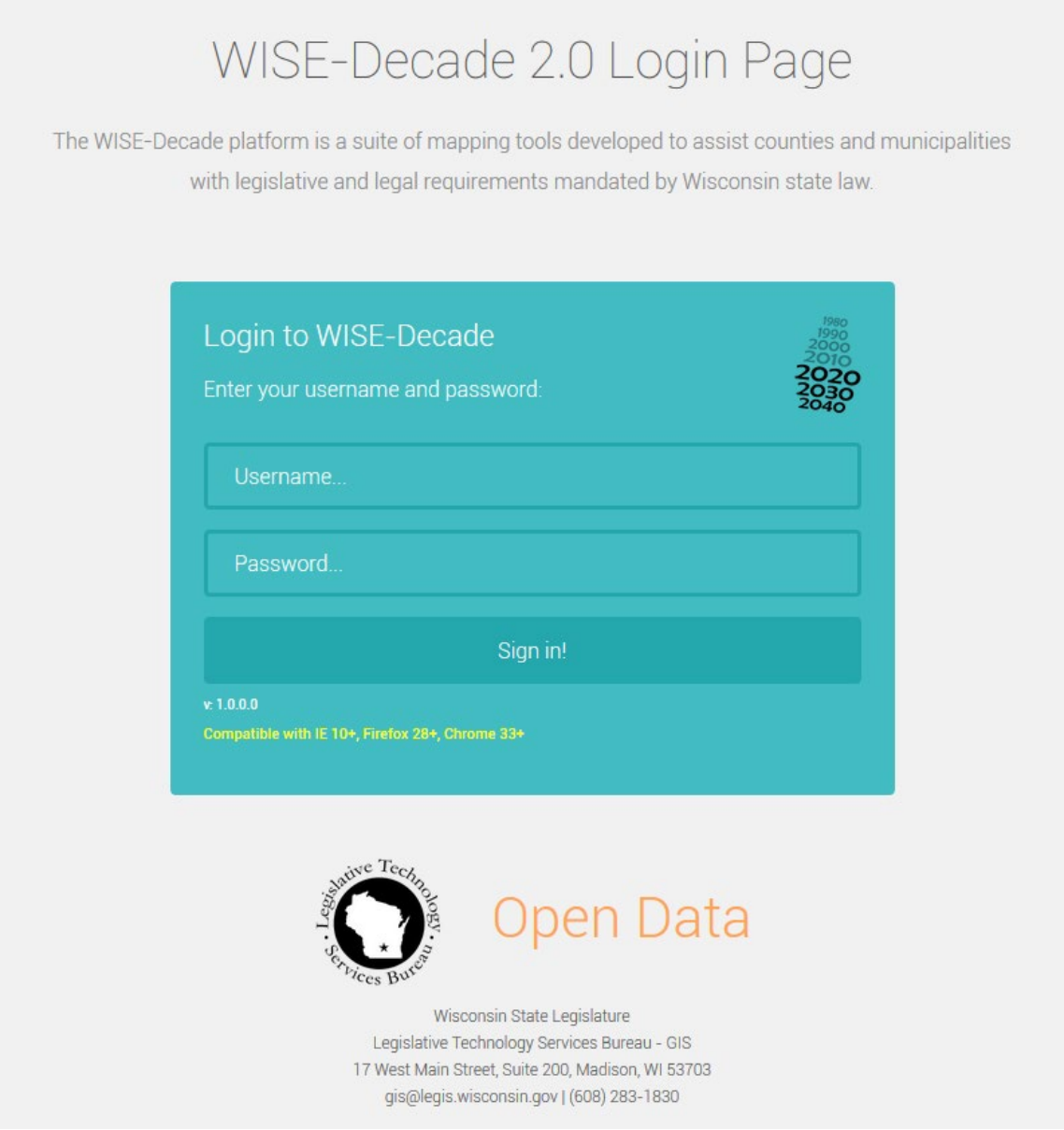
The BAS Data Collection Application within WISE-Decade compares U.S. Census Bureau geography with local municipal data to generate a symmetrical difference, automatically enter the required attributes, filter for Census defined acceptable changes, and flag potential annexations not yet submitted to, or absorbed by, the U.S. Census Bureau. The application pulls legal boundary changes submitted to DOA Municipal Data System: https://mds.wi.gov/View/Ordinances. Those annexation documents can then be selected and associated to the specific boundary change for the U.S. Census Bureau to reference.

This will not change your local dataset; it will only compare it to the U.S. Census Bureau's data. Each county will submit their data to WISE-Decade BAS Data Collection Application, and **LTSB will submit all statewide changes to the Census Bureau.**

Login to WISE-Decade 2.0 Website

LTSB supplies a **username** and **password** to each Wisconsin county. This login information will be important to keep on file, as you will need it **twice a year** for the BAS Data Collection (also called "**Municipal Ward Collection**"). LTSB will include this information on reminder emails before each collection period.

At the bottom of the login page are links to the LTSB GIS website and LTSB's Open Data Page. LTSB will also post announcements on this page.

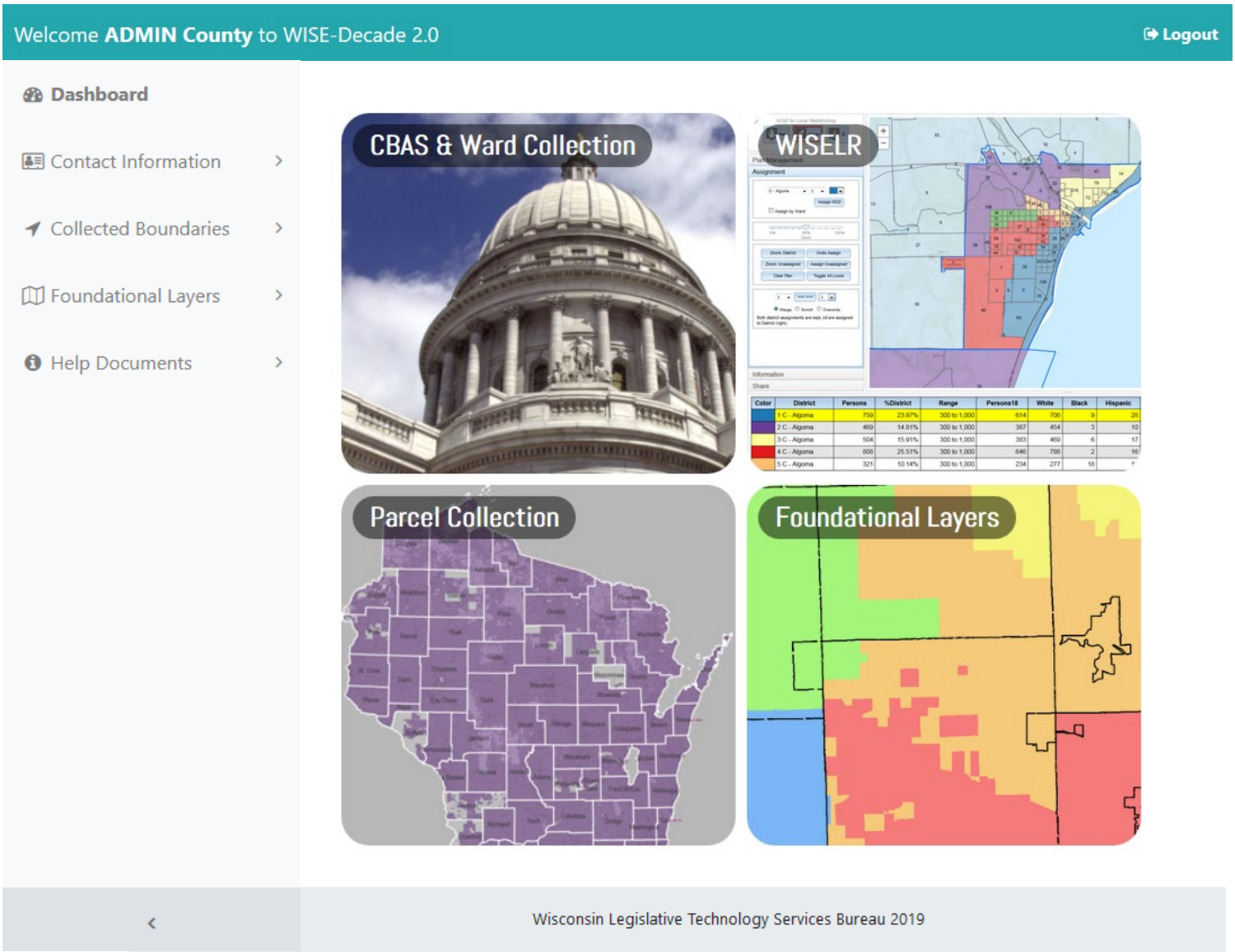


WISE-Decade 2.0 Dashboard

The dashboard is the central location for all applications within the WISE-Decade suite of tools. Currently, LTSB is hosting the following applications:

1. State BAS & Ward Collection
2. WISE-LR
3. Parcel Collection
4. Foundational Layers

The left navigation panel includes the **Contact Information** page, **Collected Boundaries** with links to **REST Services**, **Foundational Layers**, and **Help Documents**. Expand each section for additional information and downloading options.



Uploading Data into the System

Shapefile (.shp) Requirements

To submit a shapefile, **THREE** fields are **required** and must be populated:

1. **COUSUBFP** (Unique 5 digit number that designates the municipality within the US Census Bureau's TIGER data)
    a. List of COUSUBFP's for Wisconsin: https://www.census.gov/programs-surveys/bas/technical-documentation/code-lists.html
2. **WARDID** (Unique ward number)
3. **SUPERID** (supervisory district number)

Ward_Template

#1 #2 #3

FID	Shape *	COUSUBFP	WardId	SuperId
0	Polygon	00275	1	1
1	Polygon	00275	4	1
2	Polygon	00275	2	1
3	Polygon	00275	3	1
4	Polygon	00275	4	2
5	Polygon	00275	5a	2
6	Polygon	00275	5b	2
7	Polygon	00300	1	2
8	Polygon	00300	2	2
9	Polygon	00300	3	3
10	Polygon	00300	4	3

Optional fields can be included with your submissions. These can be used to create additional statewide layers. Example:

4. **AlderID** (aldermanic district).

Ward_Template

#4

FID	Shape *	COUSUBFP	WardId	SuperId	AlderId
0	Polygon	00275	1	1	1
1	Polygon	00275	4	1	1
2	Polygon	00275	2	1	2
3	Polygon	00275	3	1	2
4	Polygon	00275	4	2	3
5	Polygon	00275	5a	2	3
6	Polygon	00275	5b	2	3
7	Polygon	00300	1	2	1
8	Polygon	00300	2	2	1
9	Polygon	00300	3	3	2
10	Polygon	00300	4	3	2

Additional Requirements

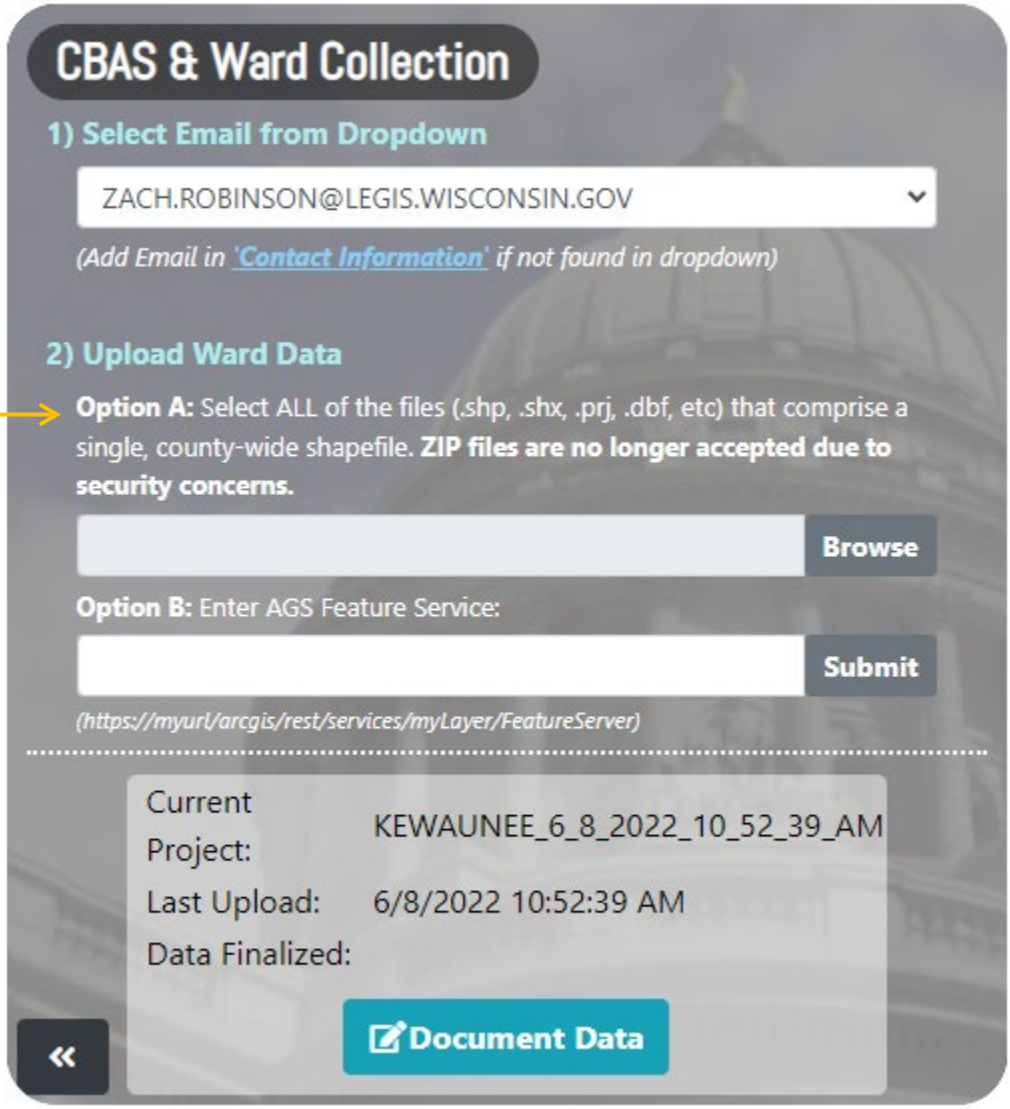
All data must have a **defined projection** other than Web Mercator; county coordinate systems and other geographic coordinate systems are acceptable. Only one feature per ward (i.e. Ward 1 in the Town of Example is a single row in the feature class/shapefile. If the county has 50 wards, there should be 50 features in the submitted dataset). Multi-part polygon features are expected.

Uploading Ward Data

Click on the '**CBAS & Ward Collection**' panel on the dashboard. First, select your email address from the dropdown. If your email is not listed, please go to the Contact Page and add your contact information. Second, choose one of two options to upload your ward data.

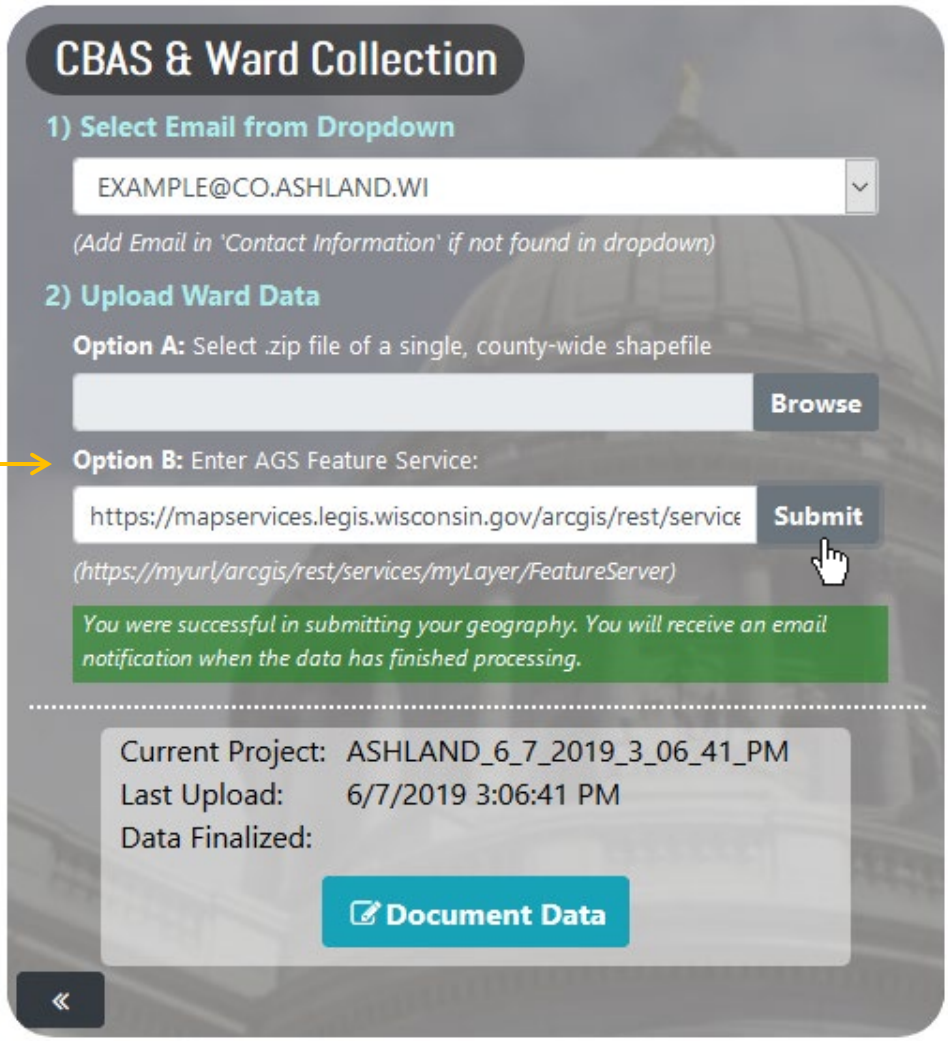
OPTION A: Select all of the files (.shp, .shx, .prj, .dbf, etc) that comprise a single, county-wide shapefile. *ZIP files are no longer accepted due to security concerns.*

1. Browse to the file location on your computer and select the different files associated to your ward polygons (.shp, .shx, .prj, . dbf, etc).
2. A green confirmation should appear saying that the upload was successful; otherwise, read the error message and adjust your file accordingly.



OPTION B: Enter AGS Feature Service

1. Find your county's municipal ward feature service rest end point.
    a. We will use Ashland County as an example: https://mapservices.legis.wisconsin.gov/arcgis/rest/services/Ashland/FeatureServer/0
2. Copy the location of the feature service from the address bar in your browser and paste into the Option B input box. You will have to ensure that '/0' has been added to the URL that you are pasting into Option B.
3. Click Submit.
4. You should see a green text box saying the submission was successful.



The automated processing of the data may take some time; anywhere from a couple of minutes to an hour based on website usage.

Once the process has completed, you will receive an email informing you that you may start reviewing your submission.

Getting Ready to Document Data within the System

After you receive the email notification that your data has finished processing, log into the system and click on the '**CBAS & Ward Collection**' panel on the dashboard, as you did during the upload process. The lower section will show information about your last upload.

Click the '**Document Data**' button.

If, for some reason, you need to re-submit your data, you may make an additional upload at any time.

Documenting Data within the System

After following the '**Document Data**' link, you will arrive at the **C-BAS Documentation Tool** main page.

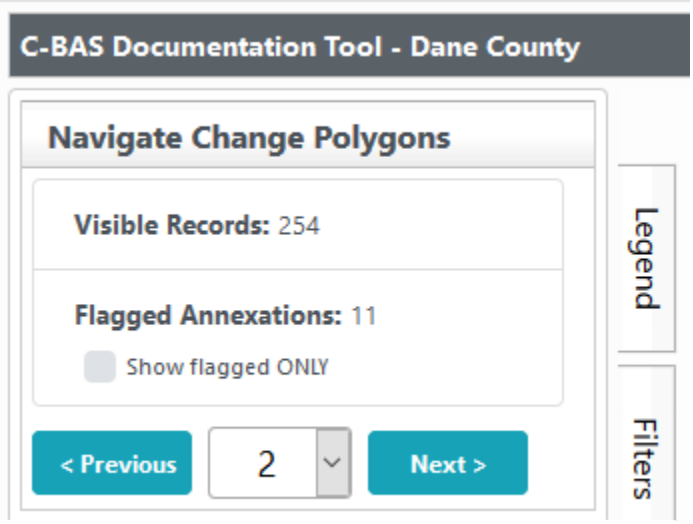
The goal for users is to locate and document any annexations or deannexations that are not currently in the U.S. Census Bureau's geographic data. The system works with a list of *change polygons* created from processing your input data and the Census BAS MCD data.

Your map will be automatically zoomed-in to the first change feature within the collection of polygons. You may zoom in and out, and interact with the map like any other web mapping application. The base map may also be toggled to a 'Satellite' layer by clicking the square in the upper right-hand corner of the map.

Navigate Change Polygons

The left panel is where you will navigate through your *change polygons* and document your records. '**Visible Records**' are records that have not been 'dismissed' from the inspection queue by marking them explicitly as 'Boundary Corrections'. All change polygons are by default a 'Boundary Correction', but if you manually designate a change polygon as only a correction (i.e. not an annexation/deannexation), the change polygon ID will be removed from the drop down list of change polygons that may need to be documented.

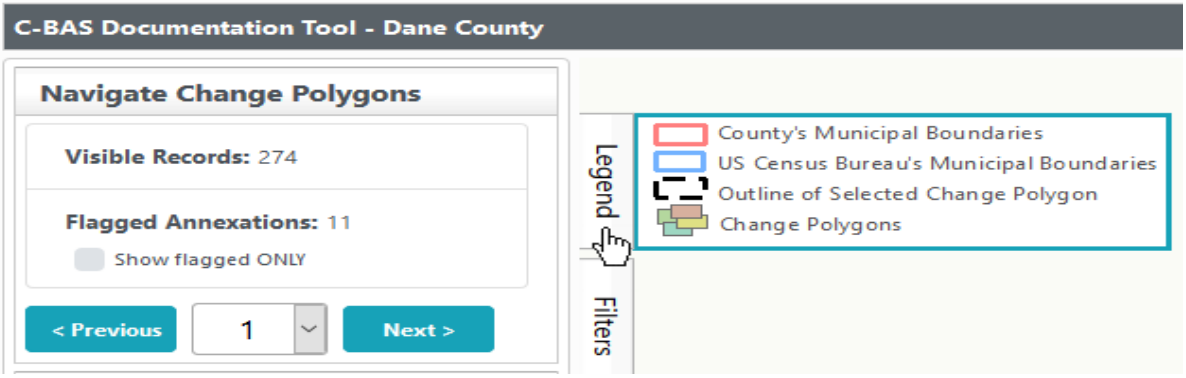
'**Flagged Annexations**' show the number of records that we have flagged as potential annexations. The WISE-Decade system will denote change polygons that meet specific criteria (i.e. Area, Shape, Compactness, Annexee, etc.) that make them a high probability that they are in fact annexations, rather than a simple boundary correction. The checkbox provides an option to show only the flagged records.



To move between *change polygons,* click the 'Previous' or 'Next' buttons, or simply select a *change polygon ID* from the dropdown.

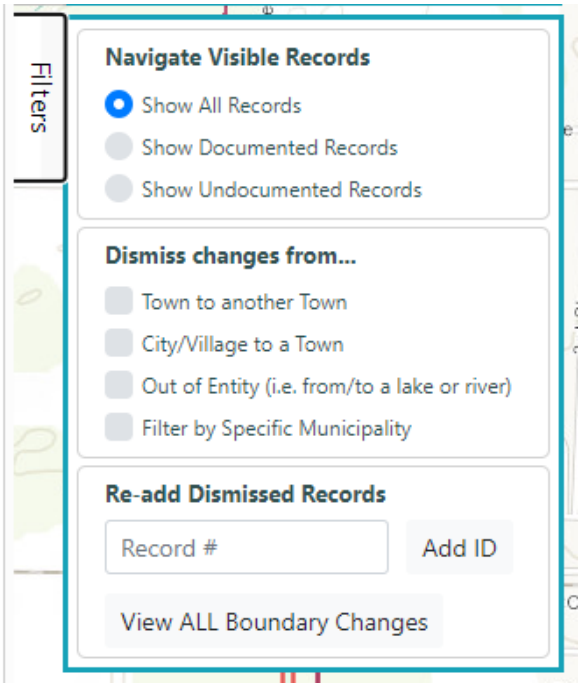
Legend

The '**Legend**' tab is located to the right of the 'Navigate Change Polygons' panel. Simply click on the tab and it will open, revealing the legend. Click 'Legend' again to close it.



Filters

The '**Filters**' tab is located to the right of the 'Navigate Change Polygons' panel, below the Legend. Simply click on the tab and it will open, revealing the optional filters. Click 'Filters' again to close it.



'**Navigate Visible Records**' provides three options:

1. Show All Records (default)
    a. This will show all the change polygons with no filters.
2. Show Documented Records
    a. This will show only those areas that have not yet been reviewed for documentation.
3. Show Undocumented Records
    a. This will show only undocumented change polygons that have not been explicitly denoted as 'Boundary Correction'. It will not show anything assigned as 'Boundary Correction' or anything that has been documented as an annexation

'Dismiss changes from...' will help remove records that are **NOT** potential candidates for annexations or deannexations. This will reduce your visible records for review. Just click the check boxes and these features will automatically be removed from your selections. You may filter out records from the list that change designation from:

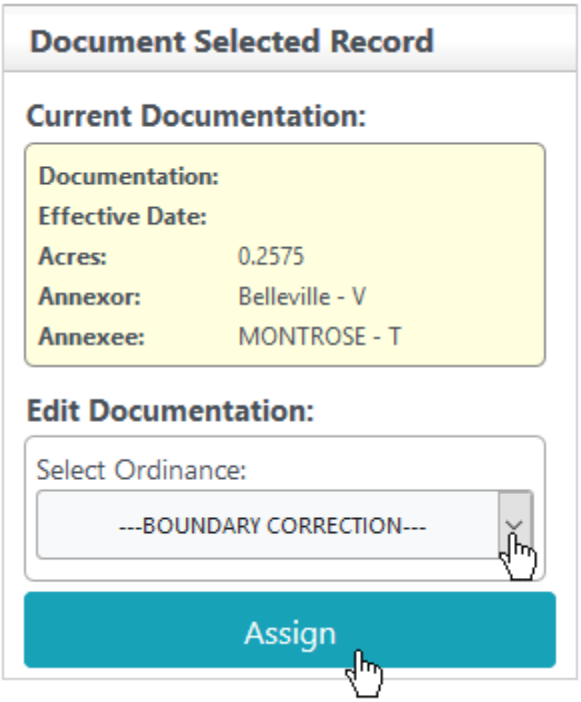
1. Town to another Town
2. City/Village to a Town
3. Out of Entity (i.e., from/to a lake or river)
4. Filter by Specific Municipality
    a. Checking this box will open a pop-up dialog listing county municipalities.

'**Re-add Dismissed Records**' allows you to add back individual IDs by entering the ID and clicking the '**Add ID**' button. There is also a '**View ALL Boundary Changes'** button which will remove all work thus far, and add all of the changes back.

Document Selected Record

Current Documentation

The yellow box indicates the current documentation for the selected record. The **Annexor** (Grantee) and **Annexee** (Grantor) will indicate which municipality the change area is moving from and to respectively. The Annexor is the municipality that is annexing or gaining territory whereas the Annexee is the municipality that is losing territory.



If the selected record is not an annexation/deannexation, then it is known as a **Boundary Correction**. Boundary Corrections are differences between your data and the Census Bureau's data that are not due to annexations or deannexations; they are simply errors or discrepancies.

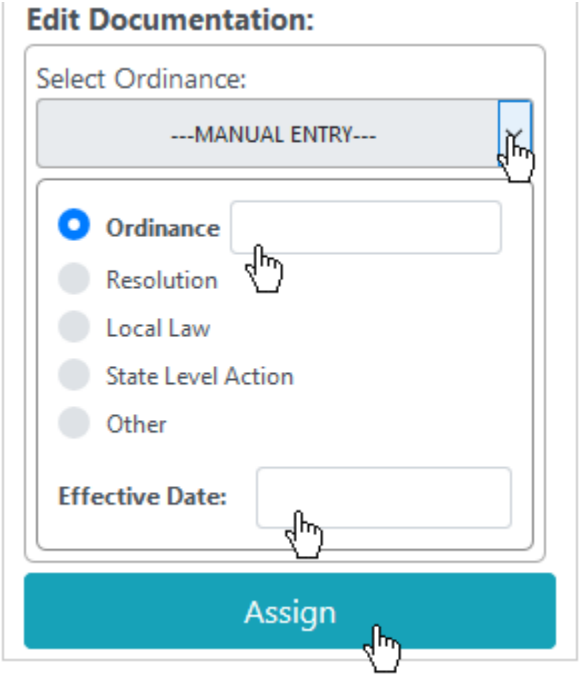
Select '**Boundary Correction'** from the '**Select Ordinance**' dropdown. Then click '**Assign'**. Once a record is assigned as a Boundary Correction, it will be removed from your list of visible records. *It is important to note that this DOES NOT DELETE the record; it only HIDES it in the list of potential annexations.*

Historical Annexation Points

Historical annexation points are displayed as black dots. Mouse over one of the point features to display an information box. Usually this is an annexation that has been entered during the first submission period in January, and the update has not yet been made by the Census when you return during the July period. You do NOT need to re-enter this information into the system. The next cycle of updating by the Census Bureau should incorporate the change.

Edit Documentation

To document a change feature, select the ordinance from the dropdown. This is where you will use the '**WI DOA Municipal Ordinances'** panel on the right for reference *(see page 13)*.



If there is a polygon that you know should be associated as an annexation or deannexation, but no document appears in the listing on the right, you can select "**Manual Entry**" from the dropdown. Enter in an ordinance, resolution, local law, or state level action number along with an effective date of the annexation. Then simply click '**Assign**. It would also be recommended that you reach out to the respective clerk to ensure this documentation has been submitted to DOA.

This information will then be saved in the proper format. Documentation will automatically be applied to future creations of BAS change files, if the change has not yet been updated in the Census data.

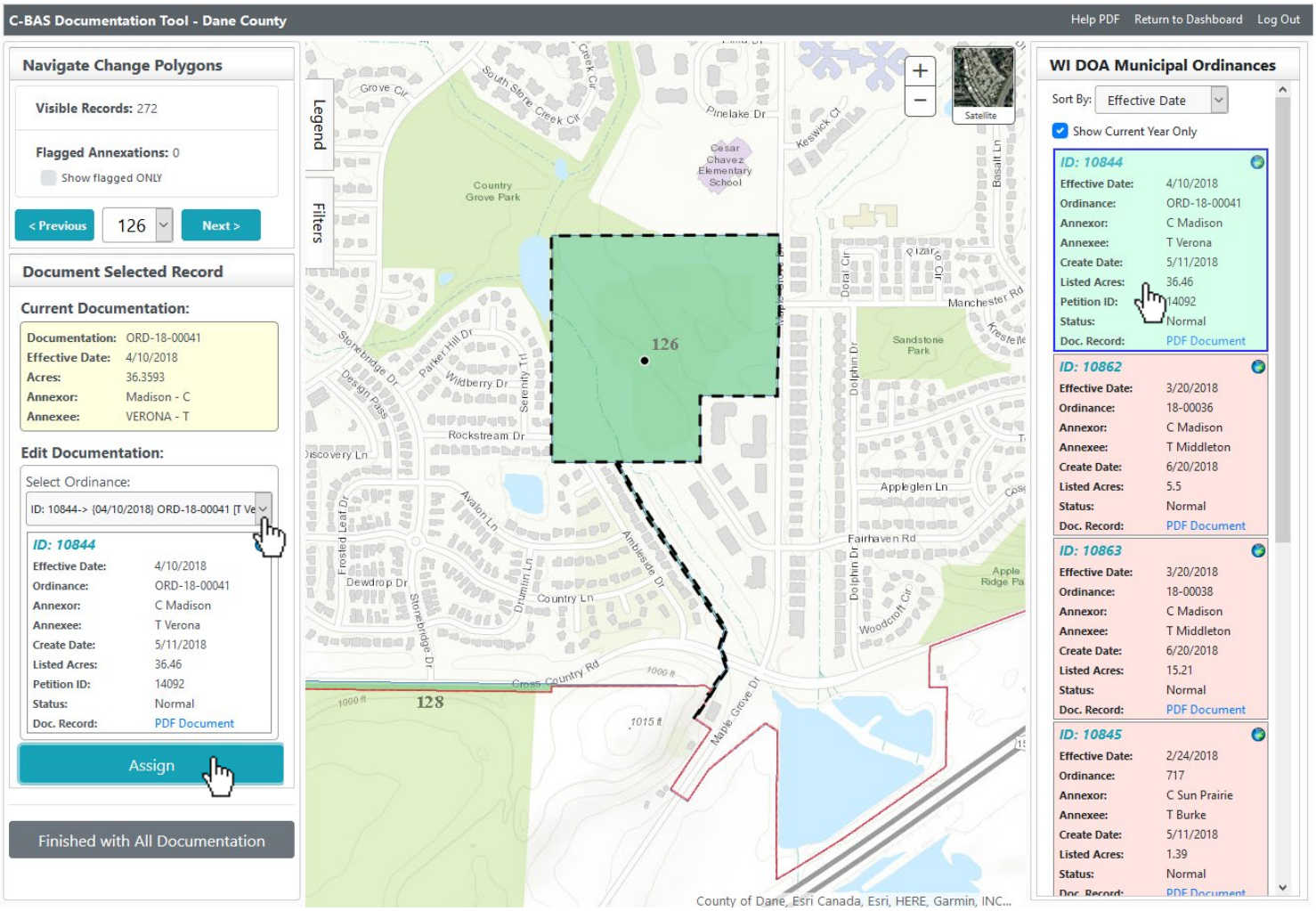
Wisconsin Dept. of Administration (DOA) Municipal Data System (MDS) Integration

On the right-hand side of the map is a pane titled **'WI DOA Municipal Data System Ordinances'**. The WISE-Decade system accesses the Wisconsin DOA's Municipal Data System (MDS) to generate a list of all annexations known to the State of Wisconsin. By state statute, all annexations and boundary changes must include ward data. This data is pulled twice a year from the Wisconsin Department of Administration Municipal Data System and can be found at https://mds.wi.gov/.

Disclaimer: *Each ordinance from the DOA MDS must have a corresponding change polygon that represents the annexation, derived from the submitted ward boundaries.*

Each ordinance will be listed with the DOA MDS Identification number, as well as other basic information such as Effective Date, and if provided by DOA, a link to the actual PDF documentation.

Ordinances from the **current year** will appear either **red** or **green**. This color indicates if the system detects whether this ordinance has been documented (green) or not (red). Once an ordinance is assigned to a change polygon in the left pane under '**Edit Documentation'**, the ordinance should appear green.



The DOA MDS ordinances are by default filtered for the most recent year, however, if there have been no annexations this year in your county, all ordinances on file will be shown. This filter may be toggled with the "**Show Current Year Only**" checkbox. The ordinances may also be sorted by:

- Effective Date
- Annexor
- Annexee
- Creation Date

A **green globe** in the upper right corner of the ordinance indicates if the PLSS description within the ordinance can be parsed, and therefore tied to a general geographic location.

Clicking on the ordinance will zoom the view to roughly the area described in the ordinances documentation. It will be up to the user to determine specifically which change polygon represents the annexation and assign it to the correct ordinance.

As previously stated, each ordinance must be assigned to a corresponding change polygon. The system will NOT allow you to make your final submission via the button "**Finished with All Documentation**" until each of these ordinances are assigned. Once each ordinance is displayed in green, you may finish your submission process.

Documentation Exceptions

There may be specific circumstances that prevent you from being able satisfy the requirements to finalize the submission of your data. These occur when the ordinance exists within the DOA MDS system, but cannot be documented for the U.S. Census Bureau.

On the right pane, under each ordinance, there is an option to exclude it from documentation given one of four valid reasons:

- **Area Below Threshold** – area being annexed is below U.S. Census threshold
- **Duplicate Ordinance** – duplicate annexation ordinance listed in the DOA MDS
- **Ordinance Rescinded** –ordinance submitted to the DOA MDS was rescinded
- **Clerical Correction** – historical ordinance was resubmitted to DOA MDS for clerical correction

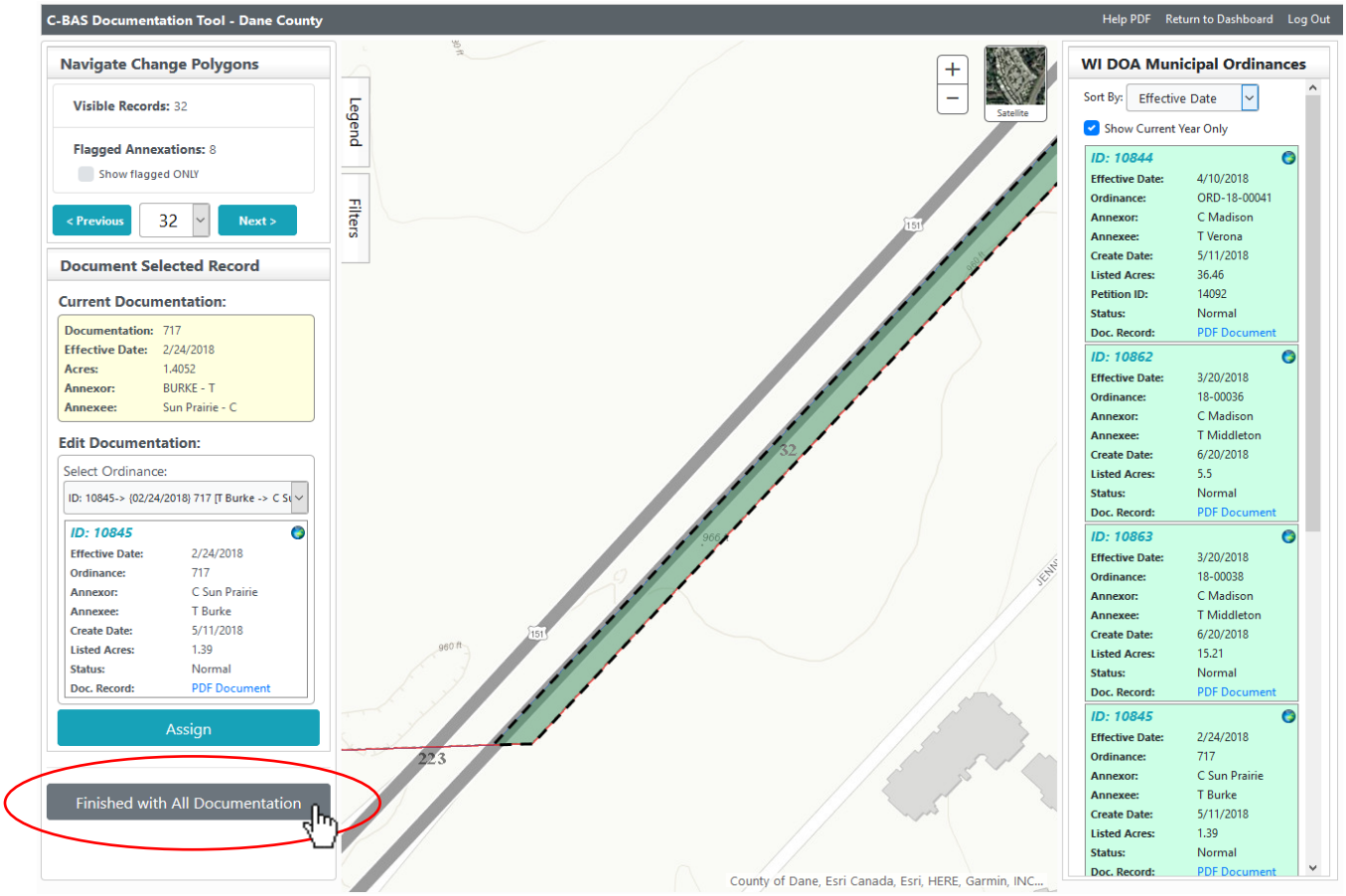
You will be required to add details justifying why the ordinance should be excluded (i.e., if the ordinance is a duplicate, include the other ordinance number in the notes).

Please note that if your submitted data does not include a recent annexation, it is not a valid reason to exclude a MDS record from documentation.

For situations when there are multiple ordinances for one polygon, use the 'Select Ordinance' drop-down on the left pane to select the first ordinance and click 'Assign'. On the same selected polygon, select the second ordinance and again click '**Assign**'. You should see both ordinances listed under '**Current Documentation**'.

Finished with All Documentation and Submit

Click '**Finished with All Documentation**' when you have completed all documentation. This will create all the necessary files for submission to the U.S. Census Bureau.



LTSB Contact Information

Please contact the LTSB-GIS team if you have any difficulties or issues. We also welcome any ideas and suggestions about how to improve this application.

LTSB GIS Team:
Phone: (608) 283-1830
Email: GIS@legis.wisconsin.gov