L T S B
G E O D A T A
C O L L E C T O R

HELP DOCUMENTATION

STATE BAS & DATA COLLECTION APPLICATION

WISCONSIN STATE LEGISLATURE

LEGISLATIVE TECHNOLOGY SERVICES BUREAU

GIS TEAM

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Introduction to the Boundary & Annexation Survey

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 governments are surveyed.

The U.S. 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. The boundaries collected through BAS also 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 agreement is to coordinate information sharing and resources between the U.S. Census Bureau and local governments for collecting boundary information. Through these agreements with state and county governments, the U.S. Census Bureau aims to reduce the duplication of efforts across the various levels of government, as well as lower the cost burden associated with the annual BAS.

Wisconsin participates in a State BAS Agreement. Wisconsin State Statute 5.15(4)(br)1 mandates all 72 county governments to report their 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 U.S. Census Bureau obtains an updated list of Highest Elected Official (HEO) from the Wisconsin Department of Revenue (DOR), and will still send information to the 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 the LTSB GeoData Collector compares U.S. Census Bureau geography with local municipal data to generate a symmetrical difference. It automatically enters the required attributes, filters for Census defined acceptable changes, and flags 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 the LTSB GeoData Collector BAS Application, and **LTSB will submit all statewide changes to the Census Bureau.**
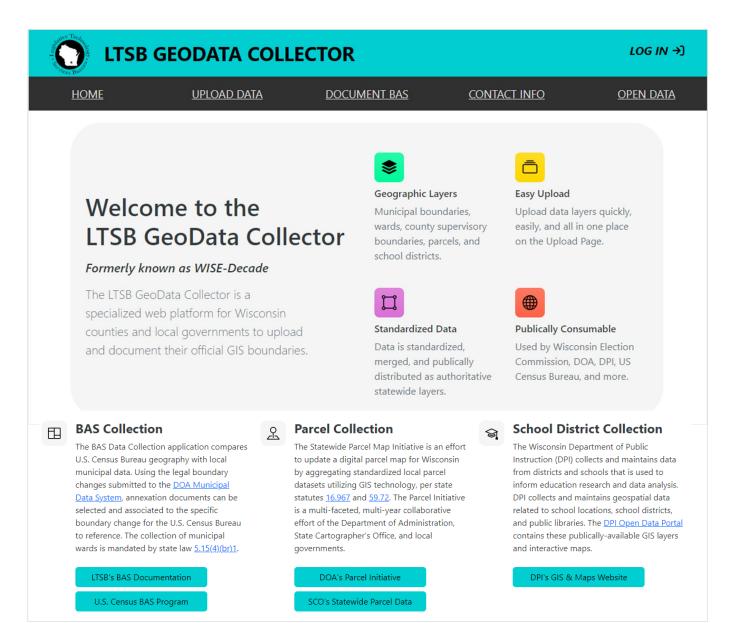
Welcome to LTSB GeoData Collector

What is LTSB GeoData Collector?

The LTSB GeoData Collector is a specialized web platform for Wisconsin counties and local governments to upload and document their official GIS boundaries. It contains data upload functionality and mapping tools to assist counties and municipalities with legislative and legal requirements mandated by Wisconsin state statutes.

What happened to the WISE-Decade Platform?

The WISE-Decade Platform has been rebranded as the LTSB GeoData Collector. The website has a new look with an improved data upload experience designed to help streamline and simplify the specific requirements for different datasets, but includes all the same functionality as before.

The new homepage (https://geodatacollector.legis.wisconsin.gov) is a public-facing website, and includes resources for specific data collections, LTSB announcements, and links to the BAS submission layers. *The WISE-Decade URL will automatically redirect to the LTSB GeoData Collector website.*

LTSB GeoData Collector Website

LTSB GeoData Collector website: https://geodatacollector.legis.wisconsin.gov

Overview of Website Pages

The top navigation panel contains several different pages for navigating through the LTSB GeoData Collector. Clicking on **Upload Data**, **Document BAS**, or **Contact Info** will prompt you to enter your username and password. You can also click **LOG IN** prior to clicking any buttons on the panel.

1. **HOME**
   - Public-facing landing page with information about the BAS, Parcel, and School District Collections; LTSB General Announcements; and links to the current and historic BAS Submission Layers.
   - Clicking the 'LTSB GEODATA COLLECTOR' website header will also return to home.
2. **UPLOAD DATA**
   - The new 'UPLOAD DATA' page allows users to upload data (Wards, Parcels, or School Districts) quickly, easily, and all in one place.
   - *Log in credentials required to access this page.*
3. **DOCUMENT BAS**
   - After uploading wards for a BAS submission, click the 'DOCUMENT BAS' page to document legal boundary changes and/or review corrections.
   - If your submission is still processing, this page will show the BAS Submission Status.
   - If your submission is ready to be documented, this page will automatically redirect to the BAS Documentation Tool application.
   - *Log in credentials required to access this page.*
4. **CONTACT INFO**
   - This page contains your county's contact information.
   - Click here to update the County Clerk, Land Information Officer, and/or any other contacts such as Alternate LIO's or Deputy CC's.
   - It is important to maintain up-to-date contact information to ensure all email notifications are received.
   - *Log in credentials required to access this page.*
5. **OPEN DATA**
   - This link directs you from the LTSB GeoData Collector to the LTSB Open Data page.
   - The most recent municipal ward, county supervisory district, and municipal boundary data that is submitted through LTSB GeoData collector will be available through the Open Data page once it has been fully collected and reviewed.

Login Page

LTSB supplies a **username** and **password** to each Wisconsin County Clerk, Land Information Officer, and any other contacts listed on the Contact Information Page.

Contact Info Page

It is important to keep your County's contact information up to date. LTSB uses this information to email login credentials twice a year before each collection period. If you have not updated your contact information in 180 days, the website will automatically redirect you to this page so you can edit or verify the contacts. Make sure to click "**Save All**" before exiting the page.

Uploading Data into LTSB GeoData Collector

Upload Data Page

The new experience has all the data upload options embedded on one page, rather than in separate pop-up windows.

First, select your Upload Type.
The default is "Wards (BAS)". Click the dropdown to select "Parcels" or "School Districts".

Second, select your Contact Email. These are linked to the information on the **Contact Info** page. *If your email is not found in the dropdown, please update the* **Contact Info** *page and click "Save All".*

Third, upload your data files. Data can be uploaded by browsing to and selecting the specific files associated to the given shapefile *(no ZIP files allowed),* or pasting an ArcGIS REST Feature Service.

File Requirements

- Must be a GIS Shapefile and include at least the following file types: *'.shp', '.dbf', '.prj', '.shx'*
- Must have a defined projection (except Web Mercator); county coordinate systems and other geographic coordinate systems are acceptable.
- Each ward must consist of only one feature. Multi-part features are expected in some cases.
  - 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.
- The entire county of municipal wards must be in one shapefile.
- Must include the required schema below. Field names are case insensitive.

Required Schema

Regardless of the upload option you choose, **THREE** fields are **required** and must be populated:

Ward_Template

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

(Column headers marked: **#1** = COUSUBFP, **#2** = WardId, **#3** = SuperId)

1. **COUSUBFP**
   - 5-character county subdivision FIPS code (e.g. '01234')
   - Zero padded, 5-digit code unique to a city, village, or township, that designates the municipality within the U.S. Census Bureau's TIGER data
2. **WARDID**
   - Municipal Ward Number (e.g '1' or '1B' or '55001012340001')
   - The unique identifier for this specific ward. May be full 14-digit Wisconsin Ward ID, or the singular identifier
3. **SUPERID**
   - County Supervisory District Number (e.g '1' or '5500101')
   - The unique identifier for the county supervisory district for this ward. May be full 7-digit Wisconsin Supervisory ID, or the singular identifier
4. **AlderID** *(optional)*
   - Municipal Alder District Number (e.g '1')
   - The unique identifier for the alderperson district of this ward. The field is not required if there are no alder districts in the county

ArcGIS REST Feature Service Option

Instead of uploading a shapefile for each collection, you can copy and paste your ArcGIS REST Feature Service directly into **OPTION B**. If you have an ArcGIS REST Feature Service for municipal wards that always represents the most up-to-date version of that data, you can check the box to allow the system to automatically pull the data from the REST Feature Service.

Submit Data

After your data is uploaded, verify the CAPTCHA and then click "Submit".

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.
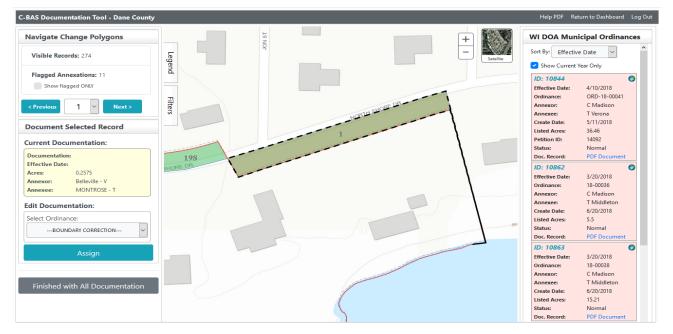
BAS Documentation Tool

Document BAS Page

After you receive the email notification that your data has finished processing, log into the LTSB GeoData Collector website and click '**Document BAS**'. This will bring you directly to the BAS Documentation Tool main page. If your data has not finished processing, the 'Document BAS' page will show your submission status.

BAS Application

The goal of the BAS Documentation Tool is 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.

The 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.
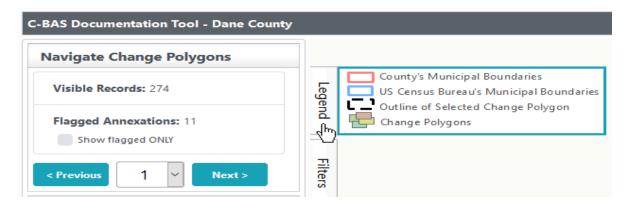
'**Flagged Annexations**' show the number of records that we have flagged as potential annexations. The BAS system will denote change polygons that meet specific criteria (i.e. Area, Shape, Compactness, Annexee, etc.) that make them a high probability that they are in fact annexations, rather than a 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 14)*.

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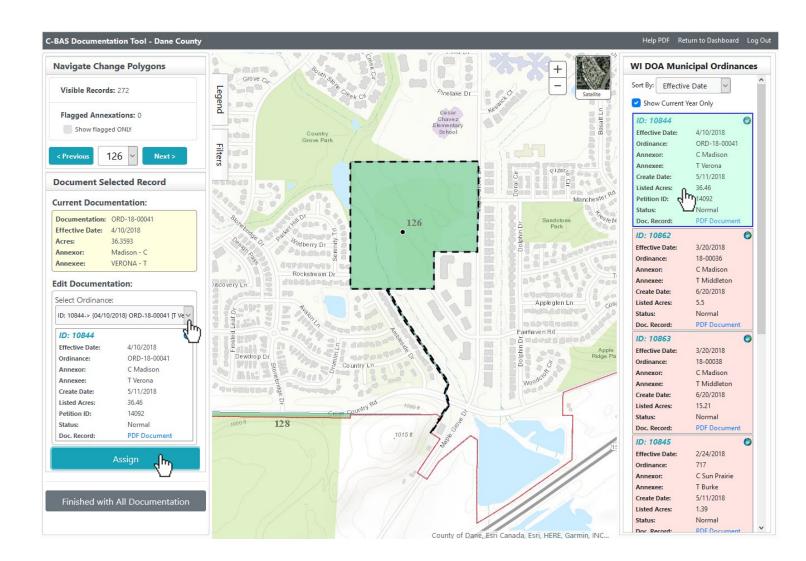
Wisconsin Dept. of Administration (DOA) Municipal Data System (MDS) Integration

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 will change to a green background.

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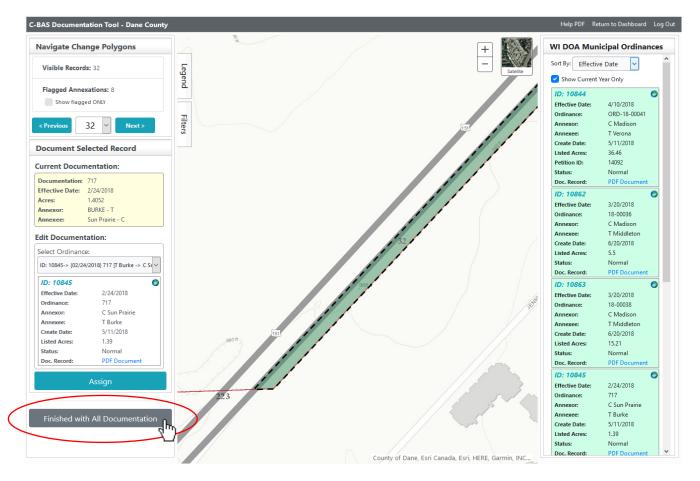
You will be required to add details justifying why the ordinance should be excluded (i.e., if the ordinance is a duplicate, include the other ordinance number in the notes).

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

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

A confirmation email will be sent indicating that processing has been completed, along with an attachment of the change. If the attachment is filtered out by your email system, a copy of the file will also be available at a given link on our FTP server for download. ***Do not*** submit this file the Census Bureau; it is for your records only. **LTSB will submit all changes to the Census bureau on behalf of each county.**

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