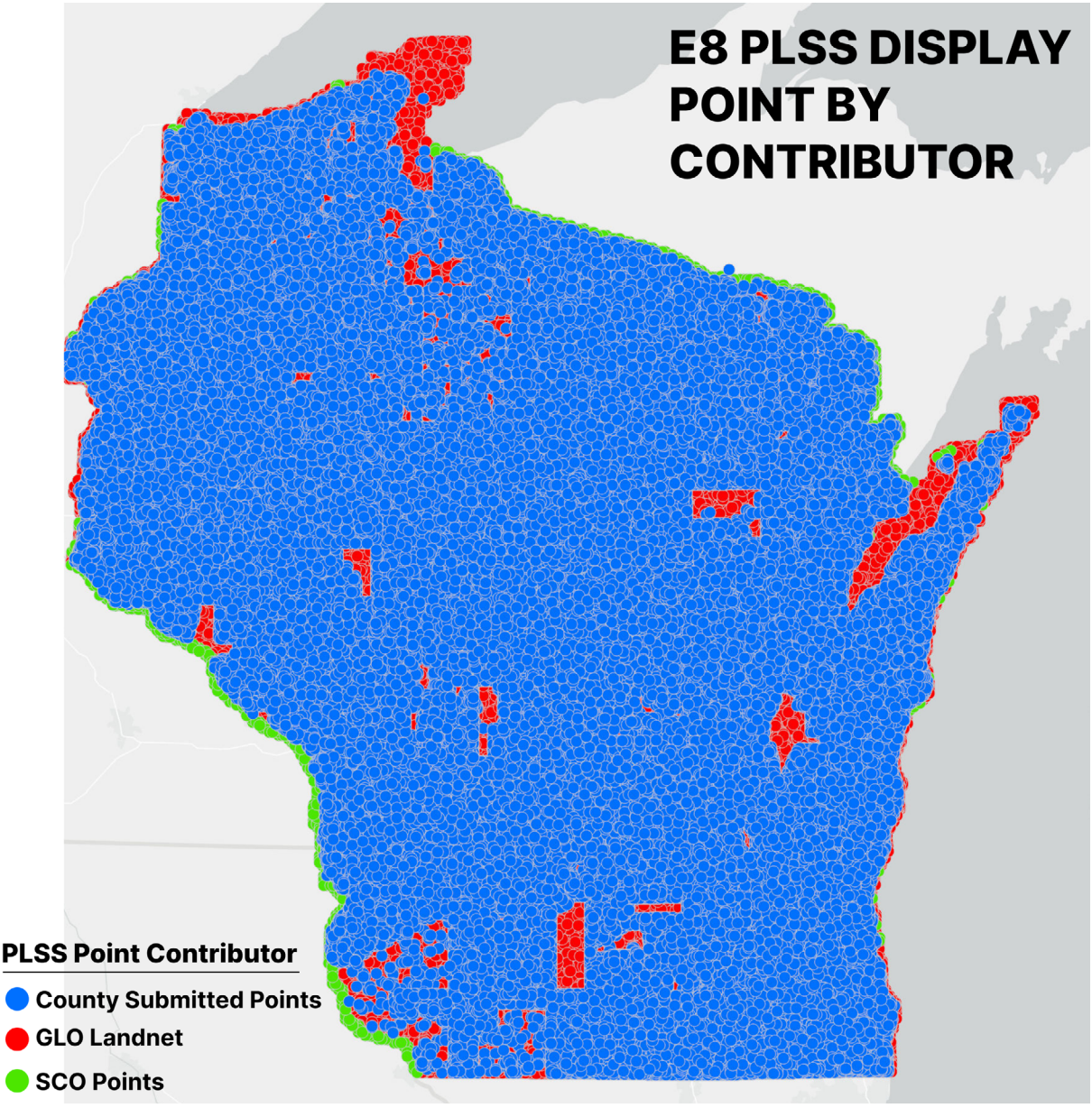
E8 PLSS DATABASE DOCUMENTATION

Edition E8 Statewide PLSS Database Project

E8 PLSS DATABASE OVERVIEW

The E8 PLSS database (E8) is defined by the specifications outlined in this document. The E8 PLSS database, part of a multi-year effort, was created as a sub-project of the greater Version 12 Statewide Parcel Map Database Project (V12 Project), a collaboration between the Wisconsin Land Information Program, the State Cartographer's Office, and county data contributors. More information about the Statewide Parcel Map Initiative can be found here.

The E8 database contains a collection of all uniquely identifiable local-level PLSS data available in digital format and aggregates that data into a standardized schema and format. The construction of the PLSS corner locations contained within the database relies on the local-level coordinate information. This unique aspect of the database allows for an accurate representation of the on-the-ground location of the PLSS corner, resulting in a more accurate polygon section layer creation. Whenever possible, county PLSS corner coordinate information was used for the construction of the section polygons. In total, 194,800 PLSS corners were used in the section polygon creation process. Of those corners used, 143,296 (~74%) were county-contributed corners and 51,504 (~26%) were GLO Landnet or SCO points (either digitized from paper maps or derived by protracting from other corners).



DATABASE CHARACTERISTICS

County Coordinates

The E8 PLSS database is based on accurate county corner coordinate values where available. The E8_PLSS_Points feature class includes a total of 296,375 points submitted by 72 counties. Corner records without complete coordinate reference information were maintained in the points feature class as attribute only records.

GLO Landnet

The E8 database uses an enhanced version of the Wisconsin Department of Natural Resources (DNR) 1994 PLSS layer, referred to as "GLO Landnet". This layer contains important information obtained from the Wisconsin General Land Office Survey records, specifically information identifying which corners were part of the original survey and subdivision of the state of Wisconsin. Information about the original field notes and the original field notes themselves can be found here.

These GLO Landnet corner coordinates were used where county data was not available. This layer serves as the "backbone" to the corner point network and all GLO Landnet corners are included in E8, even when county data exists. The (194,799) points existing in GLO Landnet served as the basis to make point associations with the native county points in the E8 database.

Standard Indexing System

The E8 databases uses a standardized indexing system for all corner points based on the Wisconsin Corner Point Identification System, commonly known as the Romportl System. See SCO publications https://www.sco.wisc.edu/pubs/statewide-plss-corner-numbering-system/ and https://www.sco.wisc.edu/pubs/extended-statewide-plss-corner-numbering-system/.

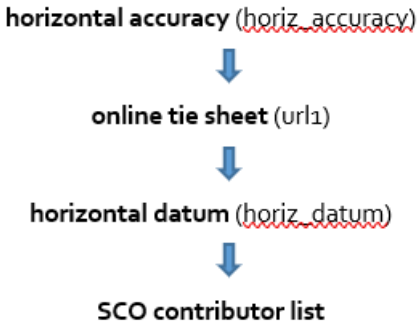
Industry Standards

The E8 database is informed by existing federal PLSS standards (CadNSDI) tailored to the specific needs of Wisconsin, particularly by considering county data characteristics, the statewide indexing standard, and de facto standards based on DNR Landnet. The BLM CadNSDI PLSS feature service can be found here.

Display Point Selection for Polygon Creation

To create polygons, a single corner representation had to be identified and selected. In most cases, this selection had to be made from multiple corner point realizations representing a single corner. In order to make the selection, a hierarchical selection criteria was defined. In order of importance, the selection criteria included:

To identify the corner points used in the creation of the E8_PLSS_Sections, select all records with *display_flag* = '1'.



Polygons to Section Level

The goal of E8 was to create a more spatially accurate representation than the DNR Landnet provides. **E8 includes section-level polygons created from high-quality, locally maintained corner coordinate information.** When possible, local-level data was used in section polygon construction. In cases where the horizontal accuracy of local-level data was unknown, GLO Landnet corner coordinate information was used.

Polygons to Quarter-Section and Quarter-Quarter-Section Level

The E8 statewide PLSS database includes quarter-section and quarter-quarter-section polygon layers. A new protraction methodology was used to create these section subdivisions. This new process relies on county submitted section and quarter-section corners. In order to construct polygons to these more granular levels, the use of artificially-generated mid-points was required. Instances of irregular or elongated sections required a distance recalculation between the quarter-section corner and the section corner that closed the section. The resulting quarter-section and quarter-quarter-section layer provide more consistent and uniform polygons.

For these reasons, **it is emphasized that the quarter-section and quarter-quarter-section polygon boundaries and the points on which they are based were subdivided by protraction and based on protracted points. These section subdivisions should be used only for mapping and reference purposes and are not representative of actual surveyed quarter sections or quarter-quarter sections.**

Identification of non-PLSS areas

The E8 database uses a GLO/non-GLO flag as a mechanism to differentiate corners surveyed in the original GLO survey. The corners in the original GLO survey can be identified where the 'glo' attribute has a value of 'true'.

E8 Database Availability

The E8 database is available in File Geodatabase feature class format, an industry-standard format and can be downloaded here. The E8 layers are also available as feature services, allowing for web application integration. These feature service links can be found here.

Web App Integration (Survey Control Finder)

Survey Control Finder (SCF) is a web application that provides a central point of access to various sets of control points across the state and is maintained by the State Cartographer's Office. This application is used extensively by the surveying community. Some of the control datasets include National Geodetic Survey (NGS) control points, Wisconsin Department of Transportation Height Modernization Program (HMP) control points, Wisconsin Continuously Operating Reference System (WISCORS) control points, as well as PLSS corners.

The new E8_PLSS_corners layer will also be integrated in the Survey Control Finder application to expand and increase the number of current PLSS corners that are displayed in the application. The primary focus and value of the application lies within the points and their respective attributes. The E8 PLSS dataset as a whole provides additional information and derivatives not applicable to SCF application, particularly the polygon layers provided.

Automated Updates

The E8 database is compatible with the long-term goal of performing automated updates of corner coordinates, including replacement of GLO Landnet coordinates. This is achieved by preserving all known corner coordinate records for every PLSS corner, and using database attributes to identify the source, quality and other aspects of the corner. Over time, as more accurate county data becomes available, a comparison workflow and tool are being developed that will allow for the identification of new and improved records. This allows for integration into the future versions of the Statewide PLSS database.

E8 PLSS to DNR Landnet Comparison

DNR Landnet was created in the 1990s by the Wisconsin Department of Natural Resources (DNR) to serve as spatial representation of the PLSS, primarily for cartographic needs. It was derived primarily from 1:24,000 scale topographic maps.

The E8_PLSS_corners improve on DNR Landnet's spatial accuracy by being based on real-world coordinates, where

available, which contain a higher degree of horizontal accuracy. These improved corner accuracies in turn lead to more accurate polygon representations. As remonumentation and maintenance efforts progress across the state, and additional, more accurate corners are integrated into the Statewide PLSS database, it can be expected that the PLSS polygon data will continue to reflect improved accuracy.

E8 to DNR Landnet Crosswalks

The tables below depict the attribute field crosswalks from the E8 PLSS datasets to DNR Landnet and the respective layers available.

Landnet Node Attribute Table	PLSS_corners
CLASS	corner_type
STATUS	-
FEATURE	-
SOURCE	-
DTRCORNER1	-
DTRCORNER2	-
DTRCORNER3	-
DTRCORNER4	-
CORN_ID	romportl_num**

Landnet PLSS Sections	Section_polygons
AREA	-
PERIMETER	-
DTRS_	-
DTRS_ID	-
DTRS	dtrs
DIR	merid_dir
TWP	township_num
RNG	range_num
SEC	section_num

Landnet PLSS Quarter-Sections	QuarterSection_polygons
PLSS_DTRSQ	dtrsq
PLSS_RNG_D	merid_dir
PLSS_TWN_I	township_num
PLSS_RNG_I	range_num
PLSS_SCTN	section_num
PLSS_Q1_SC	quarter_num
STATE_FIPS	-
PLSS_DESC	plss_description

Landnet PLSS Quarter Quarters	QuarterQuarterSection_polygons
PLSS_DTRSQ	dtrsqq
PLSS_RNG_D	merid_dir
PLSS_TWN_I	township_num
PLSS_RNG_I	range_num
PLSS_SCTN_	section_num
PLSS_Q1_SC	quarter_num
PLSS_Q2_SC	quarter_quarter_num
STATE_FIPS	-
PLSS_DESC	plss_description

DATABASE LIMITATIONS

Polygon Derivatives

The E8 PLSS database uses corner points identified by the “Display Flag” field to construct polygon representations of the PLSS in a manner similar to what currently exists for DNR Landnet. A number of polygon layers are included within this deliverable. As a result of complexities involved with creating polygons using section, quarter-section and meander corners, some minor gaps and overlaps between adjacent sections can occur. These geometric complications will be reduced through future version of the PLSS databse, as more high-quality, local-level corner data becomes available.

Local Data Availability

The amount and robustness of digital data available from the contributors varies greatly across the state. Some counties have all of their remonumentation efforts fully complete, records and attributes in digital format and have progressed into a maintenance phase. Other counties are in the very early stages of remonumentation and digitization efforts. For these reasons, varying degrees of completeness and coverage will be observed across the counties.

The table below illustrates the number of corner records present for each county in the E8 PLSS database, as well as the number of records with complete geometry. A **complete geometry** refers to a point that would be present on the map because all required information (X and Y coordinates, horizontal datum and adjustment, and coordinate reference

system) was available at the local-level in a database exportable digital format when data was submitted to SCO in 2025, allowing for the creation of the point location.

In the table you will observe instances where the '*# of records*' varies from the '*# of records w/ complete geometry*', in some cases there are significant discrepancies. When present, the causes of these discrepancies vary from one county to the next. Often times, this is a result of some missing or ambiguous coordinate reference information, which resulted in the inability to create a complete geometry. As noted previously, those corners without complete geometry are main ained as tabular records in the E8 PLSS database.

To contact individual county surveyors, consult the local government's land information websites first, or contact the city or county land information office or surveyor directly.

Counties Included

PLSS points of 72 counties were associated with GLO Landnet using valid Romportl numbers assigned according to the Statewide PLSS Corner Numbering System using PLSS corner data provided by the counties. The submitted Romportl number was used unless changes for special cases—closing corners, meander corners, and excess or deficiency in section length—were necessary to comply with the Statewide PLSS Corner Numbering System.

Romportl numbers were created for new corners only, since previously submitted corners already had Romportl Number values assigned. There were 44 counties/regional planning commissions that submitted new corners for E8 PLSS Database.

DATABASE RECORDS BY CONTRIBUTOR

Contributor	# of records	# of records w/ complete geometry
ADAMS	2091	2065
ASHLAND	2032	454
BARRON	3078	3078
BAYFIELD	5798	5792
BROWN	2562	2562
BUFFALO	1594	1594
BURNETT	4220	4220
CALUMET	2284	2284
CHIPPEWA	7157	7028
CLARK	9870	9691
COLUMBIA	2892	2892
CRAWFORD	2578	2575
DANE	5053	2856
DODGE	4030	4030
DOOR	4266	4266
DOUGLAS	4659	4658
DUNN	3062	2464
EAU CLAIRE	2178	1667
FLORENCE	6098	6055
FOND DU LAC	12309	12309
FOREST	3547	3540
GRANT	3905	844
GREEN	2604	2604
GREEN LAKE	1923	1793
IOWA	4606	4574
IRON	6172	6172
JACKSON	11780	11363
JEFFERSON	2334	2333
JUNEAU	2252	2127
KEWAUNEE	3019	3019
LA CROSSE	2477	1910
LAFAYETTE	2578	1558
LANGLADE	3650	2760

Contributor	# of records	# of records w/ complete geometry
LINCOLN	3273	3273
MANITOWOC	10680	10669
MARATHON	8319	8301
MARINETTE	5607	5607
MARQUETTE	1616	1390
MENOMINEE	229	229
MONROE	3553	3247
OCONTO	3591	3519
ONEIDA	11374	8011
OUTAGAMIE	4071	4071
PEPIN	1619	1617
PIERCE	2530	2525
POLK	6104	6065
PORTAGE	4073	4061
PRICE	2817	1307
RICHLAND	2640	1996
ROCK	2565	2565
RUSK	2949	2186
SAUK	3382	2449
SAWYER	5437	5432
SEWRPC	27410	27410
SHAWANO	7589	7503
SHEBOYGAN	2411	2411
ST CROIX	2439	2439
TAYLOR	3689	3468
TREMPEALEAU	2321	2321
VERNON	3334	3195
VILAS	5229	3625
WASHBURN	3871	3871
WAUPACA	3377	3327
WAUSHARA	1405	1400
WINNEBAGO	2193	2193
WOOD	6020	5743

Non-PLSS Areas

Non-PLSS areas (in portions of Brown, Outagamie, Calumet and Crawford counties) are included as standard sections in the E8_PLSS_Sections feature class. The sections were created using section, quarter-section and meander corners. The accurate portrayal of non-PLSS areas requires the incorporation of not only meander corners, but also meander points. Unfortunately, meander points are not available in digital format. The absence of this digital data makes it impossible to accurately depict these non-PLSS areas.

SCO Points

Points with a contributor value of "SCO" were created to close sections along the Michigan border, Mississippi River, and eastern border with Lake Michigan, where no Landnet or county points existed. These SCO points generally fall into neighboring states (Michigan, Minnesota or Iowa) and do not represent real PLSS section corners. Their purpose is simply to allow the section polygons to close. In future versions of the PLSS layer meander corners in these areas may allow for the elimination of some SCO points.



Example of SCO points added (blue squares) in Michigan to close sections 8-10 (Township 40N, Range 18E) in Florence County. (Red circles are county corners; green diamonds are from Landnet).

GEOMETRIC SPECIFICATIONS

File Specifications

The database is delivered as an Esri 10.0 File Geodatabase (.gdb) containing a single point feature class that includes all valid PLSS points and polygon feature classes containing PLSS sections, quarter-sections and quarter-quarter-sections.

Geometric Specifications

The point and polygon feature classes conforms to the following CRS (coordinate reference system) parameters:

- Datum: NAD_1983_HARN_Wisconsin_TM
- WKID: 3071
- Authority: EPSG
- Projection: Transverse Mercator
- False Easting: 520000.0
- False Northing: -4480000.0
- Central Meridian: -90.0
- Scale Factor: 0.9996
- Latitude of Origin: 0.0
- Linear Unit: Meter (1.0)

Contact Information

For inquiries related to this database, please contact:

Wisconsin State Cartographer's Office
Department of Geography
University of Wisconsin-Madison
1210 West Dayton St.
Madison, WI 53706-1613
608-262-3065
help@sco.wisc.edu
www.sco.wisc.edu

PLSS NOTES

PLSS Corner

A PLSS corner is a legal location. It marks the extremity of an area (e.g., a PLSS Section). A corner may have multiple corner points, each of which is a representation of the corner. The corner point layer contains geometric representations of corner points and their associated attributes.

The database includes all valid digital PLSS points for the 72 participating counties, regardless of grade or accuracy.

E8 PLSS CORNER SCHEMA

PLSS Schema Legend	
PLSS NAME	Denotes database field name
(Element Name)	Full English database field name (Alias Name)
<ELEMENT> [AUTO-POPULATED]	Denotes that this field is AUTO-POPULATED by the PLSS aggregation team. These fields should be left **<Null>** for data submission.
{TEXT: <#> CHAR}	Denotes the datatype of the field and character length of the field.

corner_id (Corner ID) [AUTO-POPULATED] *{DOUBLE}*

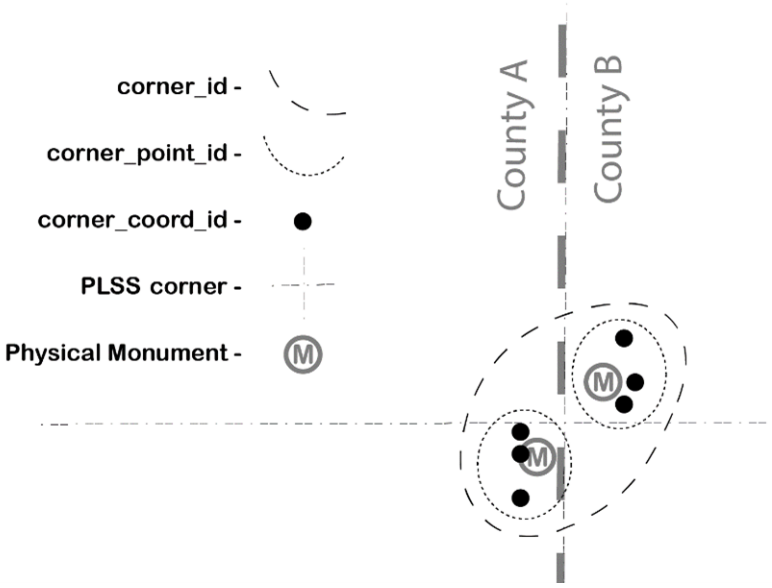
- Unique PLSS corner ID, parent class for all points associated with a PLSS corner.
- One corner may have multiple realizations.
- Number sequence begins at 100000001 and was incremented sequentially as points were added to the database. Assignment of this ID was executed by the aggregation team.
- Each unique CORNER_ID represents membership to an abstract PLSS point class. Each point participating in the abstract PLSS point class carries the same corner_id (see figure 1; all six black dots will have the same corner_id).
- Examples (this list is not exhaustive):
  > **100200001** > **100000002**

corner_point_id (Corner Point ID) [AUTO-POPULATED] *{DOUBLE}*

- Unique PLSS corner point ID, parent class for all points associated with a specific monument.
- One corner may have multiple realizations (e.g., multiple monuments), thus this ID may not be unique.
- Number sequence begins at 200000001 and was incremented sequentially as points were added to the database. Assignment of this ID was executed by the aggregation team.
- Each unique CORNER_POINT_ID represents membership to a monumented point class. Each point participating in the monumented point class carries the same CORNER_POINT_ID (see figure 1; each set of three black dots within the dotted circles has the same CORNER_POINT_ID).
- In scenarios where more than one monumentation of an abstract PLSS point exists, a new CORNER_POINT_ID was used for points tied to each respective monument.
- Examples (this list is not exhaustive):
  > **200200001** > **200000002**

corner_coord_id (Corner Coordinate ID) [AUTO-POPULATED] *{DOUBLE}*

- Unique PLSS corner point coordinate ID, child class to CORNER_ID and CORNER_POINT_ID, most atomic id within the database.
- Any corner point may have multiple coordinate values acquired at different times having different accuracies.
- Number sequence begins at 300000001 and was incremented sequentially as points were added to the database. Assignment of this ID was executed by the aggregation team.
- Each unique CORNER_COORD_ID represents a single point. Each point participating in the PLSS database carries this non-duplicated id (see Figure 1; each black dot has a different CORNER_COORD_ID).
- Examples (this list is not exhaustive):
  > **300200001** > **300000002**
- **No two records have the same CORNER_COORD_ID.**



merid_dir_alpha (Meridian Direction Alpha) **[AUTO-POPULATED]** *{TEXT: 1 CHAR}*

- The Meridian Direction Alpha indicates the direction from which the point relates to the principal meridian. Two valid domains were applied within Wisconsin. The value 'E' indicates east of the principal meridian and 'W' indicates west of the principal meridian.

merid_dir (Meridian Direction) *{TEXT: 4}*

- The Meridian Direction indicates the direction from which the point relates to the principal meridian. Two valid domains were applied within Wisconsin. The value 4 indicates east of the principal meridian and 2 indicates west of the principal meridian.

township_num (Township Number) *{TEXT: 4}*

- The Township Number indicates the PLSS Township as numbered from south to north starting at Wisconsin's baseline.
- Numbers are formatted as a two-digit text string and range from the southernmost part of Wisconsin's border as 01 to the northernmost part of the state as 53.

range_num (Range Number) *{TEXT: 4}*

- The Range Number indicates the number of PLSS townships east or west of Wisconsin's Principal Meridian.
- Numbers are formatted as a two-digit text string and emanate from the Principal Meridian starting as 01.
- Numbers increment toward the easternmost part of the state, with the maximum extent of 30.
- Numbers increment toward the westernmost part of the state, with the maximum extent of 20.

section_num (Section Number) *{TEXT: 4}*

- The Section Number indicates one of 36 divisions within a PLSS township.
- Numbers are formatted as a two-digit text string and are only unique within each township.
- Numbers increment starting from 01 in the northeastern part of the township and serpentine to 36 in the southeastern part of the township.

corner_num (Corner Number) *{TEXT: 4}*

- The Corner Number identifies a PLSS corner based on its position within the respective section. See figure 2.
- Numbers are formatted as a four-digit text string and are only unique within each section.
- Also widely known as a component to the "Romportl Number" (www.sco.wisc.edu/wp-content/uploads/2014/08/Wisconsin_Corner_Point_Identification_System.pdf)

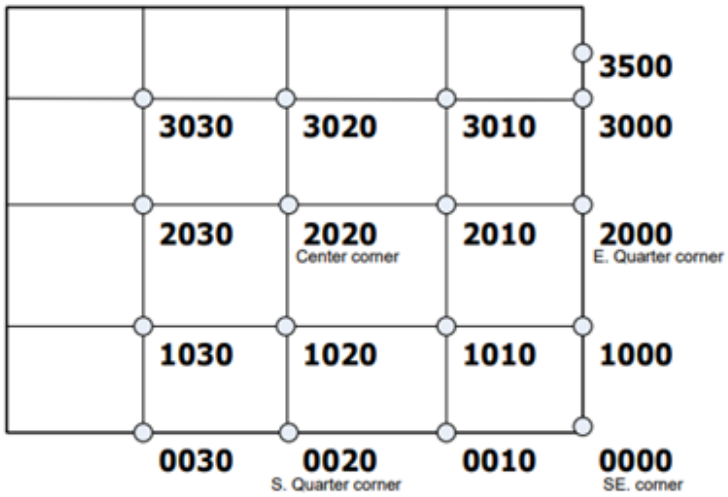


Figure 2

romportl_num (Romportl Number) **[AUTO-POPULATED]** *{TEXT: 11}*

- The Romportl Number uniquely identifies an abstract PLSS corner.
- Numbers are formatted as an eleven-digit text string and are unique for each PLSS corner across Wisconsin.
- Number is a composite of **MERID_DIR + TOWNSHIP_NUM + RANGE_NUM + SECTION_NUM + CORNER_NUM** elements.
- Also known as the "Wisconsin Point Identification system," the Romportl Number was developed by a special committee chaired by Mike Romportl, Oneida County Surveyor in the early 1990's. This system has been adopted by the Wisconsin Department of Natural Resources (WDNR) in their Land Net program.
- See the Romportl Number specification (https://www.sco.wisc.edu/wp-content/uploads/2020/08/romportl-standard-ver2-07192019.pdf) for further information and notes on special situations.
- All numbers are eleven digits in length and will always begin with a 2 or a 4
  - **E.g.:**
    - **43609162020**
    - **43709360000**

contributor_corner_id (Contributor Corner ID) *{TEXT: 100}*

- The Contributor Corner ID **uniquely** identifies a PLSS corner as assigned by the contributor.

contributor_corner_id2 (Contributor Corner ID 2) *{TEXT: 100}*

- A secondary PLSS corner id assigned by the contributor, if available.

contributor (Contributor) **[AUTO-POPULATED]** *{TEXT: 50 CHAR}*

- Indicates name of the data source, county or other entity contributing the PLSS dataset.
- Domain values were standardized as shown in the County and Regional Planning Commission Naming Conventions Codes table.

x (x Coordinate) *{ TEXT: 100 CHAR }*

- The **x** coordinate value of the point, such as **Easting** or **Longitude**.

y (y Coordinate) *{ TEXT: 100 CHAR }*

- The **y** coordinate value of the point, such as **Northing** or **Latitude**.

elev (Elevation) *{ TEXT: 100 CHAR }*

- The elevation value of the point.

horiz_units (Horizontal Units) *{TEXT: 50 CHAR}*

- The horizontal units used to express values in X and Y fields.
- Examples include:
  - > Meters
  - > U.S. Survey Feet
  - > DMS (Degrees Minutes Seconds)
  - > DD (Decimal Degrees)

coord_system (Coordinate System) *{TEXT: 100 CHAR}*

- The coordinate reference system used to express values in **X** and **Y** fields.
- When provided, the coordinate system version was standardized.

horiz_datum (Horizontal Datum) *{TEXT: 50 CHAR}*

- The horizontal datum used to express values in **X** and **Y** fields.
- When provided, the horizontal datum version was standardized.

horiz_accuracy (Horizontal Accuracy) *{TEXT: 100 CHAR}*

- The accuracy metric for the values in **X** and **Y** fields.
- This value may be different from the value within **VERT_ACCURACY** (Vertical Accuracy)
  - > The following grade types have formal definitions:
    - > **SURVEY GRADE** – coordinates collected under the direction of a Professional Land Surveyor, in a coordinate system allowed by 236.18(2), and obtained by means, methods and equipment capable of repeatable 2 centimeter or better precision
    - > **SUB-METER** – point precision of 1 meter or better
    - > **APPROXIMATE** – point precision within 5 meters or coordinates derived from public records or other relevant information
- When provided, the horizontal accuracy value was standardized.

elev_type (Elevation Type) *{TEXT: 100 CHAR}*

- Describes the measurement type for values in the **ELEV** (Elevation) field, if provided by the contributor.

vert_units (Vertical Units) *{TEXT: 50 CHAR}*

- The units used to express values in the ELEV (Elevation) field, if provided by the contributor.
- Examples include:
  - > Meters
  - > U.S. Survey Feet

vert_datum (Vertical Datum) *{TEXT: 100 CHAR}*

- The vertical datum used to express values in the ELEV (Elevation) field, if provided by the contributor.

vert_accuracy (Vertical Accuracy) *{TEXT: 100 CHAR}*

- The accuracy metric for the values the ELEV (Elevation) field, if provided by the contributor.

coord_method (Coordinate Method) *{TEXT: 100 CHAR}*

- The procedure or technology used to observe or measure the coordinate values populating the **x**, **y**, and **ELEV** fields. When provided by the contributor, this field depicts how the coordinates were obtained.

coord_date (Coordinate Date) *{TEXT: 20 CHAR}*

- The date at which coordinate values were obtained for this point.

dataset_inventory_date (Dataset Inventory Date) **[AUTO-POPULATED]** *{TEXT: 20 CHAR}*

- When the dataset was submitted to the PLSS project.

primary_contact (Primary Contact ID) **[AUTO-POPULATED]** *{TEXT: 3 CHAR}*

- A three-digit ID as text representing the primary contact and matching the Contact Table.

secondary_contact (Secondary Contact ID) **[AUTO-POPULATED]** *{TEXT: 3 CHAR}*

- A three-digit ID as text representing the secondary contact and matching the Contact Table, if available.

other_contacts (Other Contact ID) **[AUTO-POPULATED]** *{TEXT: 50 CHAR}*

- A three-digit ID as text representing additional contacts.
- This field may include more than one ID, separated by comma.

monument_type (Monument Type) *{TEXT: 255 CHAR}*

- Indicates the material used to construct the monument of the corner.

monument_date (Monument Set Date) *{TEXT: 50 CHAR}*

- The date at which the monument was physically placed in the ground.

corner_type (Corner Type) *{TEXT: 50 CHAR}*

- Indicates the PLSS Type of corner.
- Examples:
  - > SC (Section Corner)
  - > TC (Township Corner)
  - > QC (Quarter Corner)
  - > MC (Meander Corner)
  - > AP (Angle Point)
  - > OTHER
  - > C (Center)
  - > CC (Closing Corner)
  - > QQC (Quarter-Quarter Corner)
  - > WC (Witness Corner)
  - > GLC (Government Lot Corner)

display_flag (Display Flag) **[AUTO-POPULATED]** *{TEXT: 2}*

- Binary flag to indicate if this coordinate is used to display or generate a map coordinate (or polygon vertex). A value of "1" indicates that the point is displayed or used for polygon generation. A value of "0" indicates the point is not used.
- Only one "1" value per corner is allowed, but multiple "0" values per corner are acceptable.
- Acceptable domains (this list is exhaustive):
  > **1** (on) > **0** (off)

glo (GLO Survey) **[AUTO-POPULATED]** *{TEXT: 50 CHAR}*

- Classifies the Corner as having been surveyed by the General Land Office (GLO).
- The exact same ("true" or "false") value should be applied to each corner point representing a GLO Corner.
- Acceptable domains (this list **is** exhaustive):
  > **true** (GLO)
  > **false** (NOT GLO)
  > **Null** (No Join to GLO Landnet)

url1 (URL 1) *{TEXT: 255 CHAR}*

- A valid and live hyperlink to the remote resource for the corner (e.g., tie sheet).

url2 (URL 2) *{TEXT: 255 CHAR}*

- A valid and live hyperlink to an additional remote resource for the corner (e.g., tie sheet), if provided by the contributor.

url_other (URL Other) *{TEXT: 255 CHAR}*

- A valid and live hyperlink to an additional remote resource for the corner (e.g., tie sheet), if provided by the contributor.

comment (Comment) *{TEXT: 255 CHAR}*

- A freeform field, meant to store any notes or comments that could be valuable to a user of this database when provided by the contributor.

extended_romportl (Extended Romportl) **[AUTO-POPULATED]** *{TEXT: 255 CHAR}*

- A extended romportl number needed to accommodate several special cases known to occur in Wisconsin including:
  > Fractional townships, such as Township 29N Range 21-1/2E in Marinette and Oconto counties.
  > Corners in adjacent states to which surveys in Wisconsin are tied. Such corners may be referenced to a meridian other than the Extended 4th Principal Meridian
  > More information about the extended romportl number can be found here.

primary_contact_name (Primary Contact Name) **[AUTO-POPULATED]** *{TEXT: 100 CHAR}*

- Primary contact name

primary_contact_email (Primary Contact Email) **[AUTO-POPULATED]** *{TEXT: 100 CHAR}*

- Primary contact email

primary_contact_phone (Primary Contact Phone) **[AUTO-POPULATED]** *{TEXT: 20 CHAR}*

- Primary contact phone number

County and Regional Planning Commission Naming Conventions

- Spelling conventions for regional Planning Commission (RPC), County and other contributors:

ADAMS	IOWA	POLK
ASHLAND	IRON	PORTAGE
BARRON	JACKSON	PRICE
BAYFIELD	JEFFERSON	RACINE
BROWN	JUNEAU	RICHLAND
BUFFALO	KENOSHA	ROCK
BURNETT	KEWAUNEE	RUSK
CALUMET	LA CROSSE	ST CROIX
CHIPPEWA	LAFAYETTE	SAUK
CLARK	LANGLADE	SAWYER
COLUMBIA	LINCOLN	SHAWANO
CRAWFORD	MANITOWOC	SHEBOYGAN
DANE	MARATHON	TAYLOR
DODGE	MARINETTE	TREMPEALEAU
DOOR	MARQUETTE	VERNON
DOUGLAS	MENOMINEE	VILAS
DUNN	MILWAUKEE	WALWORTH
EAU CLAIRE	MONROE	WASHBURN
FLORENCE	OCONTO	WASHINGTON
FOND DU LAC	ONEIDA	WAUKESHA
FOREST	OUTAGAMIE	WAUPACA
GRANT	OZAUKEE	WAUSHARA
GREEN	PEPIN	WINNEBAGO
GREEN LAKE	PIERCE	WOOD
NORTHWEST RPC	WEST CENTRAL RPC	MISSISSIPPI RIVER RPC
NORTH CENTRAL RPC	SOUTHWESTERN RPC	BAY LAKE RPC
CAPITAL AREA RPC	SOUTHEASTERN RPC	OTHER
LANDNET	SCO	US Forest Service

E8 PLSS SECTION SCHEMA

PLSS Schema Legend	
PLSS NAME	Denotes database field name
(Element Name)	Full English database field name (Alias Name)
{TEXT: <#> CHAR}	Denotes the datatype of the field and character length of the field.

dtrs (Direction Township Range Section) *{LONG INT}*

- The DTRS (Direction Township Range Section) associated with each polygon identifies all PLSS sections in Wisconsin. The first digit indicates a range direction 2 = West, 4 = East. Second and third digits identify the township number (01 to 53). Fourth and fifth digits identify the range number (01 to 30). The sixth and seventh digits identify the section number (01 to 36).

merid_dir_alpha (Meridian Direction Alpha) *{TEXT: 1 CHAR}*

- The Meridian Direction Alpha indicates the direction from which the point relates to the principal meridian. Two valid domains were applied within Wisconsin. The value 'E' indicates east of the principal meridian and 'W' indicates west of the principal meridian.

merid_dir (Meridian Direction) *{TEXT: 4}*

- The Meridian Direction indicates the direction from which the point relates to the principal meridian. Two valid domains were applied within Wisconsin. The value 4 indicates east of the principal meridian and 2 indicates west of the principal meridian.

township_num (Township Number) *{TEXT: 4}*

- The Township Number indicates the PLSS Township as numbered from south to north starting at Wisconsin's baseline.
- Numbers are formatted as a two-digit text string and range from the southernmost part of Wisconsin's border as 01 to the northernmost part of the state as 53.

range_num (Range Number) *{TEXT: 4}*

- The Range Number indicates the number of PLSS townships east or west of Wisconsin's Principal Meridian.
- Numbers are formatted as a two-digit text string and emanate from the Principal Meridian starting as 01.
- Numbers increment toward the easternmost part of the state, with the maximum extent of 30.
- Numbers increment toward the westernmost part of the state, with the maximum extent of 20.

rf (Range Fraction) *{TEXT: 2}*

- Indicateds fractional values such as ½ for range where a fractional township exists. The dtrs field values uses 1 character for the direction, and 2 characters for township, range, and section. Since the 7 character dtrs code cannot accommodate fractional townships such as Township 29N Range 21-1/2E, which Oconto and Marinette counties share, this additional field is needed to identify the fractional range of ½.
- 0 = No Fractions
- 2 = ½

section_num (Section Number) *{TEXT: 4}*

- The Section Number indicates one of 36 divisions within a PLSS township.
- Numbers are formatted as a two-digit text string and are only unique within each township.
- Numbers increment starting from 01 in the northeastern part of the township and serpentine to 36 in the southeastern part of the township.

dnr_dtrsqq (DNR DTRSQQ) *{Long Int}*

- The DTRS (Direction Township Range Section) associated with each polygon.
- Includes trailing '00' allowing for streamlined joining with DNR Landnet section layers that contain a 9 digit DTRSQQ code.

plss_description (PLSS Description) *{TEXT: 12}*

- Alpha based DTRS (Direction Township Range Section) descriptors used for labeling and communicating locations.

E8 PLSS QUARTER-SECTION SCHEMA

PLSS Schema Legend	
PLSS NAME	Denotes database field name
(Element Name)	Full English database field name (Alias Name)
{TEXT: <#> CHAR}	Denotes the datatype of the field and character length of the field.

dtrsq (Direction Township Range Section Quarter-Section) *{LONG INT}*

- The DTRSQ (Direction Township Range Section Quarter-Section) associated with each polygon identifies all PLSS Quarter-sections in Wisconsin. The first digit indicates a range direction 2 = West, 4 = East. Second and third digits identify the township number (01 to 53). Fourth and fifth digits identify the range number (01 to 30). The sixth and seventh digits identify the section number (01 to 36). The eighth digit identifies the quarter-section number (1-4).

merid_dir_alpha (Meridian Direction Alpha) *{TEXT: 1 CHAR}*

- The Meridian Direction Alpha indicates the direction from which the point relates to the principal meridian. Two valid domains were applied within Wisconsin. The value 'E' indicates east of the principal meridian and 'W' indicates west of the principal meridian.

merid_dir (Meridian Direction) *{TEXT: 4}*

- The Meridian Direction indicates the direction from which the point relates to the principal meridian. Two valid domains were applied within Wisconsin. The value 4 indicates east of the principal meridian and 2 indicates west of the principal meridian.

township_num (Township Number) *{TEXT: 4}*

- The Township Number indicates the PLSS Township as numbered from south to north starting at Wisconsin's baseline.
- Numbers are formatted as a two-digit text string and range from the southernmost part of Wisconsin's border as 01 to the northernmost part of the state as 53.

range_num (Range Number) *{TEXT: 4}*

- The Range Number indicates the number of PLSS townships east or west of Wisconsin's Principal Meridian.
- Numbers are formatted as a two-digit text string and emanate from the Principal Meridian starting as 01.
- Numbers increment toward the easternmost part of the state, with the maximum extent of 30.
- Numbers increment toward the westernmost part of the state, with the maximum extent of 20.

rf (Range Fraction) *{TEXT: 2}*

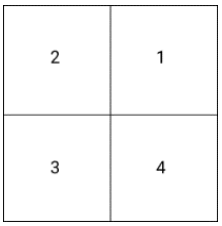
- Indicateds fractional values such as ½ for range where a fractional township exists. The dtrs field values uses 1 character for the direction, and 2 characters for township, range, and section. Since the 7 character dtrs code cannot accommodate fractional townships such as Township 29N Range 21-1/2E, which Oconto and Marinette counties share, this additional field is needed to identify the fractional range of ½.
- 0 = No Fractions
- 2 = ½

section_num (Section Number) *{TEXT: 4}*

- The Section Number indicates one of 36 divisions within a PLSS township.
- Numbers are formatted as a two-digit text string and are only unique within each township.
- Numbers increment starting from 01 in the northeastern part of the township and serpentine to 36 in the southeastern part of the township.

quarter_num (Quarter Section Number) *{TEXT:4}*

- The Quarter Section Number indicates one of the 4 division within a plss section
- Numbers are formatted as a one-digit text string
- Numbers increment starting at 1 in the northeastern quarter of the section and move counter-clockwise to the southeastern quarter



Quarter-Section Labeling Diagram

dnr_dtrsqq (DNR DTRSQQ) *{Long Int)*

- The DTRS (Direction Township Range Section) associated with each polygon.
- Includes trailing '0' allowing for streamlined joining with DNR Landnet section layers that contain a 9 digit DTRSQQ code.

plss_description (PLSS Description) *{TEXT: 12}*

- Alpha based DTRS (Direction Township Range Section) descriptors used for labeling and communicating locations.

E8 PLSS QUARTER-QUARTER-SECTION SCHEMA

PLSS Schema Legend	
PLSS NAME	Denotes database field name
(Element Name)	Full English database field name (Alias Name)
{TEXT: <#> CHAR}	Denotes the datatype of the field and character length of the field.

dtrsqq (Direction Township Range Section Quarter-Section Quarter-Quarter-Section) *{LONG INT}*

- The DTRSQQ (Direction Township Range Section Quarter-Section Quarter-Quarter-Section) associated with each polygon identifies all PLSS Quarter-sections in Wisconsin. The first digit indicates a range direction 2 = West, 4 = East. Second and third digits identify the township number (01 to 53). Fourth and fifth digits identify the range number (01 to 30). The sixth and seventh digits identify the section number (01 to 36). The eighth digit identifies the quarter-section number (1-4). The ninth digit identifies the quarter-quarter-section.

merid_dir_alpha (Meridian Direction Alpha) *{TEXT: 1 CHAR}*

- The Meridian Direction Alpha indicates the direction from which the point relates to the principal meridian. Two valid domains were applied within Wisconsin. The value 'E' indicates east of the principal meridian and 'W' indicates west of the principal meridian.

merid_dir (Meridian Direction) *{TEXT: 4}*

- The Meridian Direction indicates the direction from which the point relates to the principal meridian. Two valid domains were applied within Wisconsin. The value 4 indicates east of the principal meridian and 2 indicates west of the principal meridian.

township_num (Township Number) *{TEXT: 4}*

- The Township Number indicates the PLSS Township as numbered from south to north starting at Wisconsin's baseline.
- Numbers are formatted as a two-digit text string and range from the southernmost part of Wisconsin's border as 01 to the northernmost part of the state as 53.

range_num (Range Number) *{TEXT: 4}*

- The Range Number indicates the number of PLSS townships east or west of Wisconsin's Principal Meridian.
- Numbers are formatted as a two-digit text string and emanate from the Principal Meridian starting as 01.
- Numbers increment toward the easternmost part of the state, with the maximum extent of 30.
- Numbers increment toward the westernmost part of the state, with the maximum extent of 20.

rf (Range Fraction) *{TEXT: 2}*

- Indicateds fractional values such as ½ for range where a fractional township exists. The dtrs field values uses 1 character for the direction, and 2 characters for township, range, and section. Since the 7 character dtrs code cannot accommodate fractional townships such as Township 29N Range 21-1/2E, which Oconto and Marinette counties share, this additional field is needed to identify the fractional range of ½.
- 0 = No Fractions
- 2 = ½

section_num (Section Number) *{TEXT: 4}*

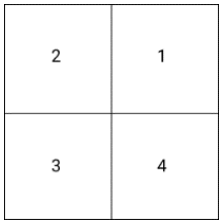
- The Section Number indicates one of 36 divisions within a PLSS township.
- Numbers are formatted as a two-digit text string and are only unique within each township.
- Numbers increment starting from 01 in the northeastern part of the township and serpentine to 36 in the southeastern part of the township.

quarter_num (Quarter Section Number) *{TEXT:4}*

- The Quarter Section Number indicates one of the 4 division within a plss section
- Numbers are formatted as a one-digit text string
- Numbers increment starting at 1 in the northeastern quarter of the section and move counter-clockwise to the southeastern quarter

quarter_quarter_num (Quarter-Quarter Section Number) *{TEXT:4}*

- The Quarter-Quarter-Section Number indicates one of the 4 divisions within a PLSS quarter-section
- Numbers are formatted as a one-digit text string
- Numbers increment starting at 1 in the northeastern quarter of the quarter-section and move counter-clockwise to the southeastern quarter of the quarter-section



Quarter-Quarter-Section Labeling Diagram

plss_description (PLSS Description) *{TEXT: 12}*

- Alpha based DTRS (Direction Township Range Section) descriptors used for labeling and communicating locations.