

TO: **Ramona & WLIP Annual Survey Comparison Study**
Coordinates / Control / PLSS Review Team

Dear Team Members:

Attached are the pertinent sections from the **Ramona web pages** and the **WLIP 2003 Annual Survey web pages**, for your comparison.

The first four pages are from Ramona. The **Systems Profile** section includes questions 9-16 concerning GPS, coordinate systems, map projections, horizontal and vertical datums, and units of measure. While essentially subsuming the WLIP survey content, some items are noted:

- Mapping, Recreational, Survey grade GPS are listed alphabetically, rather than in a logical progression;
- SPC and UTM zones are not specifically called out;
- guidance on referring to WCCS, WISCRS, WTM could be provided;
- adjustments other than NAD83(91) HARN are not listed;
- IGLD55 and IGLD85 are not listed.

The **Framework Data** section includes a category entitled **Location**, which contains four theme headings:

- Address Points +
- Geodetic Control Points +
- Geodetic Networks +
- Geographic Place Names +

The + sign indicates that a second entry with the same theme heading may be added. For each theme, characteristics of Progress, Source, Scale, Production Date, and Update Frequency are given pick lists, listed here below each characteristic. (All of these theme pick lists are the same throughout Ramona.)

For the Framework **Planning/Cadastral** section, there is a theme:

- PLSS Townships & Sections +

Besides the Framework section, there is a link to **More Planning/Cadastral data layers**, including separate headings for:

- Cadastral Surveys +
- Public Land Conveyance Records +

The WLIP 2003 Annual Survey Web pages for **Section 4: Coordinate Data**, **Section 3: Geodetic Control Networks**, and **Section 5: Public Land Survey System**, constitute the next 3 pages of this document.

A separate .pdf of **Ramona Data Categories and Layers**, sorted by Framework Data layers and Other Data layers, is also provided for your reference.

Your 2 Requested Tasks:

Please identify up to 5 Questions concerning these themes which you think might need to be added to the Wisconsin Profile of the Ramona Survey Tool. (For example:

How many PLSS corners have been remonumented in your jurisdiction ? Are coordinates developed and tied to the geodetic control network ?)

Please identify any specific guidance to users of the Wisconsin Profile of the Ramona Survey Tool. (For example: Do you intend to adopt the use of the Wisconsin Coordinate Reference System, WISCRS, within the next twelve months ?)

SYSTEMS ...

9. Does your organization collect data with a GPS receiver?

10. If yes, what grade is the GPS receiver?

- Mapping
- Recreational
- Survey
- Not Sure
- Not Applicable

11. If yes, are your GPS readings differentially corrected?

12. What map coordinate system do you typically use? (Select one)

- Geographic
- State Plane
- The National Grid
- Universal Polar Stereographic
- UTM
- Not Sure
- Not Applicable
- Other (Please list)

13. What map projection do you typically use? (Select one)

- Albers Conical Equal-Area
- Azimuthal Equidistant
- Equidistant Conic

- Equirectangular
- General vertical Near-Sided Projection
- Gnomonic
- Lambert-Azimuthal Equal-Area
- Lambert Conformal-conic
- Mercator
- Miller Cylindrical
- Modified Stereographic for Alaska
- Oblique Mercator
- Orthographic
- Polar Stereographic
- Polyconic
- Robinson
- Sinusoidal
- Space Oblique Mercator
- Stereographic
- Transverse Mercator
- Van der Grinten
- Not Sure
- Not Applicable
- Other (Please list)

14. What horizontal datum do you typically use? (Select one)

- NAD 27
- NAD 83
- NAD83 (91) - HARN
- WGS 84
- Not Sure
- Not Applicable
- Other (Please list)

15. What vertical datum do you typically use? (Select one)

- NGVD 29

- NAVD 88
- None
- Not Sure
- Not Applicable
- Other (Please list)

16. What units of measure do you typically use? (Select one)

- Decimal Degrees
- Feet
- International Feet
- Meters
- U.S. Survey Feet
- Not Sure
- Not Applicable
- Other (Please list)

FRAMEWORK DATA

Location [Help](#) > [More Location data layers](#)

* To duplicate a layer click the plus symbol (+) next to the layer name

Address Points +	Progress	Source	Scale	Production Date	Update Frequency
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="YYY"/>	<input type="text"/>
	<input type="text" value="layer description (max 255 chars)"/>				
	Complete In Work Planned	Field Observation Field Survey / GPS Hardcopy Maps LIDAR Orthoimagery Published Reports / Deeds RADAR TIGER Line Files Uncorrected Imagery Not Sure Other	 1:600 1:1200 1:2400 1:4800 1:7200 1:9600 1:12,000 1:24,000 1:63,360 1:100,000	<i>Enter Year –</i> <i>No error trapping</i> <i>(?)</i>	Continually Daily Weekly Monthly Quarterly Semi-Annually Annually Every 2 Years Every 3 Years Every 4 Years As Needed Irregular None Planned Do Not Know

[edit geography](#)

Geodetic Control Points +

<input type="text"/>	<input type="text"/>	<input type="text"/>	YYY	<input type="text"/>
----------------------	----------------------	----------------------	-----	----------------------

layer description (max 255 chars)

[edit geography](#)

Geodetic Networks +

<input type="text"/>	<input type="text"/>	<input type="text"/>	YYY	<input type="text"/>
----------------------	----------------------	----------------------	-----	----------------------

layer description (max 255 chars)

[edit geography](#)

Geographic Place Names +

<input type="text"/>	<input type="text"/>	<input type="text"/>	YYY	<input type="text"/>
----------------------	----------------------	----------------------	-----	----------------------

layer description (max 255 chars)

[edit geography](#)

FRAMEWORK DATA

Planning/Cadastral [Help](#) > [More Planning/Cadastral data layers](#)

PLSS Townships & Sections +

Progress	Source	Scale	Production Date	Update Frequency
<input type="text"/>	<input type="text"/>	<input type="text"/>	YYY	<input type="text"/>

layer description (max 255 chars)

Note: All of the Pick Lists are identical to those above used for Parcels.

[edit geography](#)

Planning/Cadastral

[Help](#)

* To duplicate a layer click the plus symbol (+) next to the layer name

Cadastral Surveys +

Progress	Source	Scale	Production Date	Update Frequency
<input type="text"/>	<input type="text"/>	<input type="text"/>	YYY	<input type="text"/>

layer description (max 255 chars)

[edit geography](#)

Public Land Conveyance Records +

<input type="text"/>	<input type="text"/>	<input type="text"/>	YYY	<input type="text"/>
----------------------	----------------------	----------------------	-----	----------------------

layer description (max 255 chars)

[edit geography](#)

save



Section 4: Coordinate Data

1. What is the **primary** coordinate system used by your county for digital mapping/GIS?

Wisconsin County Coordinate System

2. What is the **primary** horizontal datum used by your county for digital mapping/GIS?

North American Datum of 1983, 1991 Adjustment(NAD83(91))

3. What is the **primary** vertical datum used by your county for digital mapping/GIS?

North American Vertical Datum of 1988 (NAVD 88)

4. Does your county have the ability to convert non-compliant data to the coordinate system used by your county?

- Yes, we process it internally
- Yes, we contact it out
- No

Comments?

Dane County Coordinate System

Section 3: Geodetic Control Networks

The WLIP geographic reference frameworks foundational element includes geodetic control networks (e.g., horizontal and vertical networks), the Public Land Survey System (section corner remonumentation and coordinates), and geographic control data (e.g., features captured on planimetric and topographic base maps, and by aerial photography and digital orthophotography).

Horizontal Geodetic Control Networks

In the early 1990's, the Wisconsin Department of Transportation (WisDOT), together with the National Geodetic Survey (NGS), developed a High Accuracy Reference Network (HARN) to provide primary horizontal control for Wisconsin.

1. Does your county have a horizontal geodetic control network that pre-dates or is not based on the Wisconsin HARN?

- Yes
- No

2. Has your county developed a densified horizontal control network using the Wisconsin HARN?

- Yes
- No, but our county plans to, *Skip to Question #5*
- No, and there are no plans to, *Skip to Question #5*

3. If yes, were WLIP, FGCS, and/or WisDOT guidelines followed in the densification of the HARN?
Check all that apply.

<input checked="" type="checkbox"/>	Yes, WLIB Specifications and Guidelines to Support Densification of the Wisconsin High Accuracy Reference Network (HARN) Using Global Positioning System (GPS) Technology – June 1995 were used.
<input checked="" type="checkbox"/>	Yes, Federal Geodetic Control Subcommittee guidelines were used.
<input checked="" type="checkbox"/>	Yes, WisDOT guidelines were used.
<input type="checkbox"/>	No, none of these guidelines were used.

4. If densification of the horizontal control network has been initiated, how much densification work has been completed within your county?

	Number of stations completed in your county	Additional stations needed or planned
HARN	7	
Primary Stations (1 part per million)		
Secondary Stations (2 parts per million)	5	
Tertiary Stations (4 parts per million)		
Tertiary Stations (10 parts per million)	26	

5. Were the horizontal control stations for your county blue booked (i.e. conform to the Input Formats and Specifications of the National Geodetic Survey Data Base of the Federal Geodetic Control Subcommittee) and submitted to the National Geodetic Survey for inclusion in their national database?

- Yes
 No

Vertical Geodetic Control Networks

6. Has your county developed a densified vertical control network based on the National Spatial Reference System?

- Yes
 No, but our county plans to
 No, and there are no plans to

7. Comments?

sting NGS control stations, and established new vertical control.

Section 5: Public Land Survey System

1. Does your county have an active remonumentation program?

Yes

No

Planned

2. How many PLSS corners (section, $\frac{1}{4}$, meander) in your county have been remonumented meeting or exceeding 1970 Wisconsin statute requirements?

corners of

corners total.

3. When PLSS corners in your county are being remonumented or reestablished, are coordinates developed and tied to the geodetic control network?

Yes

No

Planned

4. How many PLSS corners in your county have FGCC Third Order Class 1 coordinate values?

corners of

corners total.

5. Comments?

Please identify up to 5 Questions concerning these themes which you think might need to be added to the Wisconsin Profile of the Ramona Survey Tool.

1.

2.

3.

4.

5.

Please identify any specific guidance to users of the Wisconsin Profile of the Ramona Survey Tool.