



Wisconsin State Cartographer's Office



Your resource for mapping and geographic information in the state of Wisconsin

January 2009

ControlFinder

Access to online geodetic control

www.sco.wisc.edu/geocat/

ControlFinder is a free, Internet-accessible catalog designed to help users locate information about geodetic control points in Wisconsin. Geodetic control information accessible through this application includes Wisconsin Height Modernization Program (WI-HMP)¹ control, local control established by Wisconsin counties, National Geodetic Survey (NGS) control,² and historical USGS 3rd order vertical control. Some information is stored in the application, while other information is available via direct links to information maintained by the county on their Web site.

Delivering control information

Wisconsin has tens of thousands of survey control monuments placed by numerous agencies over many decades, so the avenues for finding control point information are varied.

Our office has been the key point of contact for federal (USGS and NGS) control for over 30 years. In our continuing effort to make this information more accessible as a central point of access, we developed ControlFinder.³

What's inside?

To date, we host records of control information for 15 counties; the published WI-HMP (see illustration on reverse side); the NGS control (statewide horizontal/vertical); and the USGS 3rd order control (statewide vertical only). Control points are shown in a common view so that users can visually navigate, locate and identify them.

The various attribute information provided through ControlFinder includes name, coordinates, datums, metadata, and other pertinent characteristics for that point. Direct linkages to digital tie sheets (data sheets) are available for many control points from ControlFinder to the contributing agency's Web site.



Furthermore, as an additional service, we've recently introduced map-based status and links from the initial statewide view to other local Web sites where geodetic control information may be found, providing a common entry point for geodetic control information in Wisconsin.

Navigating

There are five ways to navigate the ControlFinder state map, all of which may be used at any time:

- Draw a rectangle by selecting the Zoom Box under Tools
- Use the navigation buttons in the left pane
- Zoom to a county
- Use the directional pan buttons around the map
- Search by PID for the point name

Another option is the ability to change the size of the ControlFinder application window to better fit your screen size by selecting either of the links "Small, Medium, or Large" located toward the upper-right corner. By default, ControlFinder opens in the "small" window size.

Printing

At any time, you may print a PDF of the map image you're viewing by selecting the "Print Map" button located in the lower left corner of the map view. Also available is the ability to save your "identified" corners for exporting as a text file which can be imported into other software.

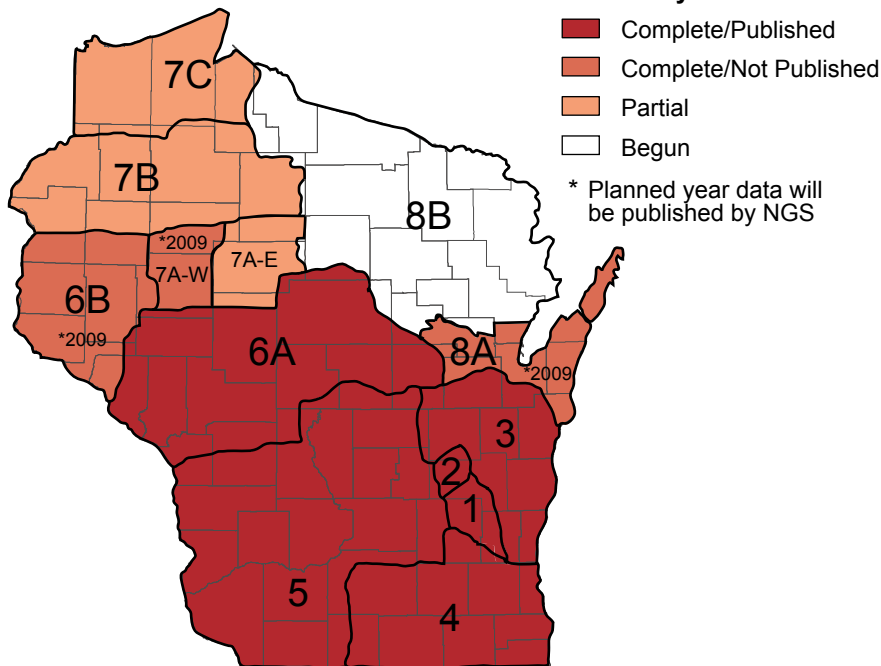
Status

County control information is updated regularly depending on the agency publishing schedules. Consult either the metadata or the date given in the "view full record"

Wisconsin Height Modernization Program

(WI-HMP)

Status - January 2009



* Planned year data will be published by NGS

Contributing geodetic control information is easy. Simply give us your dataset in any of the following formats: shapefile (preferred), xls, csv, dbf, mdb, or txt.

Data layers

County Control: Various counties have added their control point information to ControlFinder, providing a common entry point for geodetic control in Wisconsin. In all cases, the county maintains complete authority, stewardship, and responsibility for their data.

NGS Control: the mission of the NGS is to “define and manage a national coordinate system” known as the National Spatial Reference System (NSRS).⁴ The NSRS is a consistent coordinate system that defines a number of parameters for each geodetic control monument in the United States. Periodically, the NGS point database is loaded into ControlFinder along with a direct link to its current corresponding datasheet from the NSRS database.

Web References

1. Wisconsin Height Modernization Program (WI-HMP)
www.sco.wisc.edu/surveying/hmp.php
2. National Geodetic Survey
www.ngs.noaa.gov
3. ControlFinder
www.sco.wisc.edu/geocat/

WI-HMP Control: To improve the density of vertical bench marks listed in the NSRS with accurate orthometric heights (elevations), the WIDOT, in cooperation with the NGS, has been working on the WI-HMP since 1998 to improve elevation data throughout Wisconsin.

The strategy used by the WIDOT divided the state into geographic regions. For the status of this program, see the illustration above.

Once NGS publishes the completed region to the NSRS, the dataset for that region is extracted from the NSRS database and added to ControlFinder with direct links to their current datasheets.

USGS Control: USGS 3rd Order vertical control is legacy elevation data of varying quality. The horizontal positions of these points were derived from 1:24,000-scale map sources as well as extracted from a USGS database (WIVERT). Horizontal accuracy varies according to source of

4. National Spatial Reference System (NSRS)
www.ngs.noaa.gov/NationalReadjustment/
5. Survey Station Condition Report Form
www.sco.wisc.edu/surveying/stationreport.php

derived position. All of these points have orthometric heights as well as a “to reach” description.

Because of the age of these monuments and lack of maintenance, many of the USGS points may not exist today. Refer to the “comments” field for logged station reports.

The USGS elevation monuments are not actively maintained by anyone in Wisconsin. Our office has undertaken voluntary custodianship of the information for purposes of historical reference. We also maintain station condition reports as an aid in monument recovery.

Disturbance/Destruction

The value of control information or boundary marking is jeopardized by any disturbance to a monument, so protection is key. Missing or disturbed geodetic control markers, as well as those in danger of being disturbed, can be reported to the agency stamped on the cap or by filling out a survey station condition report form.⁵

For more information on ControlFinder visit:

www.sco.wisc.edu/geocat/



www.sco.wisc.edu

The State Cartographer's Office has been Wisconsin's source for information about maps and geographic data for over 30 years. Located in Science Hall on the UW-Madison campus, the SCO maintains a large and diverse Web site including an online newsletter, catalogs, calendar, contact lists, and background information on mapping topics. Our staff presents educational programs and workshops, and participates in a wide range of organizations.

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