

# **WEST VIRGINIA LEGISLATURE**

## **2024 REGULAR SESSION**

**Introduced**

### **Senate Bill 540**

By Senator Woodrum

[Introduced January 24, 2024; referred  
to the Committee on Government Organization]

1 A BILL to amend and reenact §1-1-5 of the Code of West Virginia, 1931, as amended, relating to  
2 updating the West Virginia coordinate systems.

*Be it enacted by the Legislature of West Virginia:*

**ARTICLE 1. LIMITS AND JURISDICTION.**

**§1-1-5. West Virginia coordinate systems; definitions; plane coordinates, limitations of use; conversion factor for meters to feet; official geodetic datum.**

1 (a) The following acronyms used throughout this section shall have the following  
2 meanings:

3 ~~(1)~~ "FGDC" means the Federal Geographic Data Committee or its successors;

4 ~~(2)~~ "NSRS" means "The National Spatial Reference System" or its successors;

5 ~~(3)~~ "NGS" means "The National Geodetic Survey" or its successors;

6 ~~(4)~~ "SPCS" means "State Plane Coordinate System" or its successors; and

7 ~~(5)~~ "WVCS" means "The West Virginia Coordinate System".

8 (b) The most recent system of plane coordinates which has been established by the NGS,  
9 based on the NSRS, and known as the SPCS, for defining and stating the positions or locations of  
10 points within West Virginia shall be known and designated as the West Virginia Coordinate  
11 System.

12 (c) The plane coordinate values used to express the position or location of a point in this  
13 system shall consist of two distances, expressed in U.S. Survey feet and decimals of a foot or in  
14 meters and decimals of a meter. One of these distances, to be known as the x-coordinate, shall  
15 give the position in an east-and-west direction. The other, to be known as the y-coordinate, shall  
16 give the position in a north-and-south direction.

17 (d) The associated factor of one meter equals 39.37/12 United States Survey feet shall be  
18 used in any conversion necessitated by changing values from meters to United States Survey feet.

19 ~~(e) For the purpose of the use of this system the state is divided into a North Zone and a  
20 South Zone.~~

21           ~~The area now included in the following counties is the North Zone: Barbour, Berkeley,~~  
22 ~~Brooke, Doddridge, Grant, Hampshire, Hancock, Hardy, Harrison, Jefferson, Marion, Marshall,~~  
23 ~~Mineral, Monongalia, Morgan, Ohio, Pleasants, Preston, Ritchie, Taylor, Tucker, Tyler, Wetzel,~~  
24 ~~Wirt and Wood.~~

25           ~~The area now included in the following counties is the South Zone: Boone, Braxton, Cabell,~~  
26 ~~Calhoun, Clay, Fayette, Gilmer, Greenbrier, Jackson, Kanawha, Lewis, Lincoln, Logan, McDowell,~~  
27 ~~Mason, Mercer, Mingo, Monroe, Nicholas, Pendleton, Pocahontas, Putnam, Raleigh, Randolph,~~  
28 ~~Roane, Summers, Upshur, Wayne, Webster and Wyoming.~~

29           ~~(f) As established for use in the North Zone, the WVCS shall be named and in any land~~  
30 ~~description, map, survey or geospatial product in which it is used it shall be designated the WVCS~~  
31 ~~North Zone.~~

32           ~~As established for use in the South Zone, WVCS shall be named and in any land~~  
33 ~~description, map, survey or geospatial product in which it is used it shall be designated the WVCS~~  
34 ~~South Zone.~~

35           ~~(g)(e)~~ Information and mathematical data for defining the WVCS, and previous versions  
36 thereof, including but not limited to, the West Virginia Coordinate System of 1927 and the West  
37 Virginia Coordinate System of 1983, and information and mathematical data for translating or  
38 converting coordinates between the WVCS and the previous versions thereof, shall be the  
39 information and data published by the NGS for such purposes.

40           ~~(h) (f)~~ For purposes of describing the location of any survey station in the State of West  
41 Virginia, it shall be considered a complete, legal and satisfactory description of the location to give  
42 the position of the survey station on the WVCS as defined in this section.

43           ~~(i) (g)~~ Any survey that establishes WVCS coordinates to express definite positions, which  
44 is to be used or relied upon by any federal, state or local government entity, or by the public  
45 generally, shall be performed:

46 (1) By a professional surveyor licensed to practice surveying in the State of West Virginia  
47 pursuant to §30-13A-1 *et seq.* of this Code; and

48 (2) In compliance with all other laws, rules or regulations governing surveying in the State  
49 of West Virginia;

50 (3) In compliance with the Geospatial Positioning Accuracy Standards established and  
51 published by the FGDC, and in effect at the time the survey is performed.

52 ~~(j)-(h)~~ In addition to any other requirements imposed by law, rule or regulation, any map,  
53 plat, report, description or geospatial product that claims to report WVCS coordinates to express  
54 definite positions, to be used or relied upon by any federal, state or local government entity, or by  
55 the public generally, shall show, or have attached thereto, metadata that meets the requirements  
56 established by the FGDC in effect at the time the map, plat, report, description or geospatial  
57 product was produced, including a description of the methodology used to establish the WVCS  
58 coordinate values reported that is adequate for users to evaluate the accuracy of the coordinates.

59 ~~(k)~~ (i) For purposes of describing the location of any land boundary corner in the State of  
60 West Virginia, it shall be considered a complete, legal and satisfactory description of the location  
61 to give the position of the land boundary corner on the WVCS as required in this section, in  
62 addition to other location information as may otherwise be required by law, rule or regulation:  
63 *Provided*, That nothing contained in this section requires a purchaser or mortgagee of real  
64 property to rely wholly on a land description, any part of which depends exclusively upon the  
65 WVCS.

66 ~~(l) When any tract of land to be defined by a single description extends from one into the~~  
67 ~~other of the coordinate zones specified in this section, the position of all points on its boundaries~~  
68 ~~may refer to either of the two zones. The zone which is being used shall be specifically named in~~  
69 ~~the description.~~

70 ~~(m)~~ (j) No coordinates based on the WVCS, purporting to define the position of a point on a  
71 land boundary, may be presented to be recorded in any public records or deed records unless a

72 certification is attached thereto and, recorded simultaneously therewith, certifying the coordinates  
73 were established in compliance with the laws, rules and regulations governing surveying in West  
74 Virginia by a professional surveyor licensed to practice surveying in West Virginia pursuant to §30-  
75 13A-1 *et seq.* of this code.

76 ~~(n)~~ (k) A plat and a description of survey purporting to define the position of a point on a  
77 land boundary by the use of the WVCS must show the following:

78 (1) The accuracy of the coordinates stated at the 95 percent confidence level and in  
79 compliance with the Geospatial Positioning Accuracy Standards established and published by the  
80 FGDC in effect at the time of the survey. The coordinate accuracies reported by the surveyor shall  
81 take into account the network accuracy of existing control, as well as additional systematic effects:

82 (2) The applicable datum, datum tag, epoch date in a decimal year format, and the zone  
83 that are the basis of the coordinates. The datum, datum tag, epoch date and zone shall be as  
84 published by the NGS and shall be shown by an appropriate note, or by suffix such as "NAD83  
85 (2011) epoch 2010.00, WVCS, South Zone"; and

86 (3) The signature and seal of the professional surveyor licensed to practice surveying in  
87 West Virginia pursuant to §30-13A-1 *et seq.* of this code.

88 ~~(o)~~ (l) The use of the term "West Virginia Coordinate System North or South Zone" on any  
89 map, report or survey or other document shall be limited to coordinates based on the WVCS as  
90 defined in this section.

91 ~~(p)~~ (m) Nothing in this section prevents the recording in any public record of any deed,  
92 map, plat, survey, description or of any other document or writing of whatever nature which would  
93 otherwise constitute a recordable instrument or document even though the same is not based  
94 upon or done in conformity with the WVCS established by this section, nor does nonconformity  
95 with the WVCS invalidate any deed, map, plat, survey, description or other document which is  
96 otherwise proper.

97           ~~(e)~~ (n) The official geodetic datums to which geodetic coordinates (including, but not  
98 limited to, latitude, longitude, ellipsoid height, orthometric height or dynamic height) are referenced  
99 within the State of West Virginia shall be as defined for the NSRS.

100           ~~(f)~~ (o) Any map, plat, report, description or geospatial product that establishes or reports  
101 geodetic positions referenced to the NSRS for the purpose of expressing definite positions that is  
102 to be used by or relied on by any federal, state or local government entity or by the public generally  
103 shall comply with the accuracy and reporting requirements set forth above for the WVCS.

104           ~~(s)~~ (p) The provisions of this chapter shall may not be construed to prohibit the appropriate  
105 use of other coordinate systems, datums and other geodetic reference networks.

NOTE: The purpose of this bill is to update the West Virginia coordinate systems.

Strike-throughs indicate language that would be stricken from a heading or the present law  
and underscoring indicates new language that would be added.