

No. 1992-161

AN ACT

HB 1859

Amending the act of June 2, 1937 (P.L.1208, No.310), entitled "An act to describe, define, and officially adopt a system of coordinates for designating the positions of points on the surface of the earth within the Commonwealth of Pennsylvania," further providing for the system of plane rectangular coordinates; providing for the Pennsylvania Coordinate System of 1983; further providing for the establishment of triangulation or traverse stations; further providing for the recording of land records or deeds; and proscribing use of the Pennsylvania Coordinate System of 1927 after a certain date.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Sections 1, 2, 3, 5, 6 and 7 of the act of June 2, 1937 (P.L.1208, No.310), entitled "An act to describe, define, and officially adopt a system of coordinates for designating the positions of points on the surface of the earth within the Commonwealth of Pennsylvania," are amended to read:

Section 1. Be it enacted, &c., That the system of plane rectangular coordinates which has been established and adopted by the [United States Coast and Geodetic Survey] *National Ocean Service/National Geodetic Survey (formerly the United States Coast and Geodetic Survey) or its successors* for defining and stating the positions or locations of points on the surface of the earth within the Commonwealth of Pennsylvania is hereafter known and designated as the "Pennsylvania Coordinate System."

For the purpose of the use of this system, the Commonwealth is divided into two zones: the "North Zone," and the "South Zone."

The area now included in the following counties shall constitute the North Zone:

Bradford, Cameron, Carbon, Centre, Clarion, Clearfield, Clinton, Columbia, Crawford, Elk, Erie, Forest, Jefferson, Lackawanna, Luzerne, Lycoming, McKean, Mercer, Monroe, Montour, Northumberland, Pike, Potter, Sullivan, Susquehanna, Tioga, Union, Venango, Warren, Wayne, and Wyoming.

The area now included in the following counties shall constitute the South Zone:

Adams, Allegheny, Armstrong, Beaver, Bedford, Berks, Blair, Bucks, Butler, Cambria, Chester, Cumberland, Dauphin, Delaware, Fayette, Franklin, Fulton, Greene, Huntingdon, Indiana, Juniata, Lancaster, Lawrence, Lebanon, Lehigh, Mifflin, Montgomery, Northampton, Perry, Philadelphia, Schuylkill, Snyder, Somerset, Washington, Westmoreland, and York.

Section 2. As established for use, the Pennsylvania Coordinate System shall be named, and in any land description, *map, report of survey or other*

document in which it is used it shall be designated, the "Pennsylvania Coordinate System North Zone," or "Pennsylvania Coordinate System South Zone," as the case may be. *Also included with the designation "Pennsylvania Coordinate System" shall be a notation indicating whether the 1927 datum or the 1983 datum was used.*

Section 3. The plane rectangular coordinates of a point on the earth's surface, to be used in expressing the position of a point in the appropriate zone of this system, shall consist of two distances, expressed in feet and decimals of a foot **[from a given point. One]** *when using the Pennsylvania Coordinate System of 1927 and expressed in meters and decimals of a meter when using the Pennsylvania Coordinate System of 1983. For State Plan Coordinate System (SPCS) 27, one* of these distances, to be known as the "x coordinate," shall give the position in an east-and-west direction, the other, to be known as the "y coordinate," shall give the position in a north-and-south direction. *For State Plan Coordinate System (SPCS) 83, one of the distances, to be known as the "northing" or "N", shall give the position in a north-and-south direction; the other, to be known as the "easting" or "E", shall give the position in an east-and-west direction.* These coordinates shall be made to depend upon and conform to the plane rectangular coordinates of the triangulation and traverse stations of the **[United States Coast and Geodetic Survey]** *National Ocean Survey/National Geodetic Survey (formerly the United States Coast and Geodetic Survey)* within the Commonwealth of Pennsylvania, as those coordinates have been determined by said survey.

Section 5. For purposes of more precisely defining the Pennsylvania Coordinate System, the following definition by the **[United States Coast and Geodetic Survey]** *National Ocean Survey/National Geodetic Survey (formerly the United States Coast and Geodetic Survey)* is adopted:

The Pennsylvania Coordinate System of 1927, North Zone, consists of a Lambert conformal projection of the Clarke spheroid of 1866, having a central meridian **[77° 45'] 77 degrees 45 minutes** west of Greenwich. The intersecting cone of this projection cuts the surface of the spheroid in parallels of latitude **[40° 53' and 41° 57'] 40 degrees 53 minutes and 41 degrees 57 minutes** north of the equator, along which parallels the scale shall be exact. The origin of coordinates for this zone is at the intersection of the meridian **[77° 45'] 77 degrees 45 minutes** west longitude and the parallel **[40° 10'] 40 degrees 10 minutes** north latitude. This origin is given the coordinates $x = 2,000,000$ feet; $y = 0$ feet.

The Pennsylvania Coordinate System of 1927, South Zone, consists of a Lambert conformal projection of the Clarke spheroid of 1866, having a central meridian **[77° 45'] 77 degrees 45 minutes** west of Greenwich. The intersecting cone of this projection cuts the surface of the spheroid in parallels of latitude **[39° 56' and 40° 58'] 39 degrees 56 minutes and 40 degrees 58 minutes** north of the equator, along which parallels the scale shall be exact. The origin of coordinates for this zone is at the intersection of the meridian **[77° 45'] 77 degrees 45 minutes** west longitude and the parallel **[39° 20'] 39 degrees 20 minutes** north latitude. This origin is given the coordinates $x = 2,000,000$ feet; $y = 0$ feet.

The Pennsylvania Coordinate System of 1983, North Zone, consists of a Lambert conformal projection of the North American datum of 1983, having a central meridian of 77 degrees 45 minutes west. The northern standard parallel is latitude 41 degrees 57 minutes and the southern standard parallel is latitude 40 degrees 53 minutes, along which parallels the scale shall be exact. The origin of coordinates is at the intersection of the meridian 77 degrees 45 minutes west longitude and the parallel 40 degrees 10 minutes north latitude. This origin is given the coordinates $n = 0$ meters; $e = 600,000$ meters.

The Pennsylvania Coordinate System of 1983, South Zone, consists of a Lambert conformal projection of the North American datum of 1983, having a central meridian of 77 degrees 45 minutes west. The northern standard parallel is latitude 40 degrees 58 minutes and the southern standard parallel is latitude 39 degrees 56 minutes, along which parallels the scale shall be exact. The origin of coordinates is at the intersection of the meridian 77 degrees 45 minutes west longitude and the parallel 39 degrees 20 minutes north latitude. The origin is given the coordinates $n = 0$ meters; $e = 600,000$ meters.

Standard conversions of coordinates from meters to feet will be computed using the United States survey foot with a definition of $1200/3937 m =$ United States survey foot.

The position of the Pennsylvania Coordinate System shall be as marked on the ground by fundamental triangulation or traverse stations established by the [United States Coast and Geodetic Survey, in conformity with the standards adopted by the United States Coast and Geodetic Survey] *National Geodetic Survey, formerly the United States Coast and Geodetic Survey* for first-order and second-order work, whose geodetic positions have been rigidly adjusted on the North American datum of 1927, *and redefined on the North American datum of 1983* and whose plane coordinates have been computed on the system here defined. Such stations, established by the [U. S. Coast and Geodetic Survey] *National Geodetic Survey, formerly the United States Coast and Geodetic Survey*, and any other triangulation and traverse stations which have been [definitely established by] *established in accordance with the standards of accuracy and specifications by the Federal Geodetic Control Committee of the United States Department of Commerce* or in accordance with the requirements of the State department authorized to administer this act, may be used for establishing a survey connection with the Pennsylvania Coordinate System.

Section 6. No coordinates based on the Pennsylvania Coordinate System, purporting to define the position of a point on a land boundary, shall be presented to be recorded in public land records or deed records unless [such point is within one-half mile of a triangulation or traverse station established as prescribed in section 5 of this act, unless the State department authorized to administer this act shall by its rules and regulations increase or decrease such one-half mile distance for the whole Commonwealth or any area or areas thereof] *the licensed land surveyor in charge attaches a certificate regarding the beginning coordinate source and adheres*

to third-order geodetic surveying procedures or better in effect at the time of the survey as outlined by the Federal Geodetic Control Committee.

[Section 7. The use of the term "Pennsylvania Coordinate System" on any map, report of survey, or other document, shall be limited to coordinates based on the Pennsylvania Coordinate System as defined in this act.]

Section 2. The act is amended by adding a section to read:

Section 7.1. The Pennsylvania Coordinate System of 1927 shall not be used after December 31, 1995. The Pennsylvania Coordinate System of 1983 shall be the sole system after this date.

Section 3. This act shall take effect in 60 days.

APPROVED—The 16th day of December, A. D. 1992.

ROBERT P. CASEY