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Proposed Legislation to Amend NM Law Chapter 47, Article 1

47-1-49. New Mexico coordinate system; zones.

The system of plane coordinates which has been established by the ~~national ocean survey~~ National Ocean Service (NOS) and ~~national geodetic survey~~ National Geodetic Survey (NGS) for defining and stating the positions or locations of points on the surface of the earth within the state of New Mexico shall be known and designated as the "New Mexico coordinate system". As used in Section 47-1-49 through 47-1-56 NMSA 1978, the term "New Mexico coordinate system" includes ~~both~~ the New Mexico coordinate system of 1927, ~~and~~ the New Mexico coordinate system of 1983~~.~~, and the New Mexico coordinate system of 2022.

A. For the purpose of the use of ~~this system~~ New Mexico coordinate system of 1927 and New Mexico coordinate system of 1983, the state is divided into an "east zone", "central zone" and a "west zone".

The area now included in the following counties shall constitute the east zone: Chaves, Colfax, Curry, DeBaca, Eddy, Guadalupe, Harding, Lea, Mora, Quay, Roosevelt, San Miguel and Union.

The area now included in the following counties shall constitute the central zone: Bernalillo, Dona Ana, Lincoln, Otero, Rio Arriba, Sandoval, Santa Fe, Los Alamos, Socorro, Taos, Torrance and Valencia.

The area now included in the following counties shall constitute the west zone: Catron, Cibola, Grant, Hidalgo, Luna, McKinley, San Juan and Sierra.

B. For the purpose of the use of New Mexico coordinate system of 2022, the state shall have a “New Mexico zone”, “east zone”, “central zone”, and “west zone”.

The area included in all counties within the State of New Mexico shall constitute the New Mexico zone.

The area now included in the following counties shall constitute the east zone: Chaves, Colfax, Curry, DeBaca, Eddy, Guadalupe, Harding, Lea, Mora, Quay, Roosevelt, San Miguel and Union.

The area now included in the following counties shall constitute the central zone: Bernalillo, Dona Ana, Lincoln, Otero, Rio Arriba, Sandoval, Santa Fe, Los Alamos, Socorro, Taos, Torrance and Valencia.

The area now included in the following counties shall constitute the west zone: Catron, Cibola, Grant, Hidalgo, Luna, McKinley, San Juan and Sierra.

History: 1953 Comp., § 70-1-47, enacted by Laws 1957, ch. 147, § 1; 1989, ch. 104, § 1.

47-1-50. Zone designations.

As established for use in the east zone, the New Mexico coordinate system shall be named and in any land description in which it is used it shall be designated the "New Mexico coordinate system of 1927, east zone", ~~or~~ the "New Mexico coordinate system of 1983, east zone"~~.~~, or the "New Mexico coordinate system of 2022, east zone".

As established for use in the central zone, the New Mexico coordinate system shall be named and in any land description in which it is used it shall be designated the "New Mexico coordinate system of 1927, central zone", ~~or~~ the "New Mexico coordinate system of 1983, central zone"~~.~~, or the "New Mexico coordinate system of 2022, central zone".

As established for use in the west zone, the New Mexico coordinate system shall be named and in any land description in which it is used it shall be designated the "New Mexico coordinate system of 1927, west zone", ~~or~~ the "New Mexico coordinate system of 1983, west zone"~~.~~, or the "New Mexico coordinate system of 2022, west zone".

History: 1953 Comp., § 70-1-48, enacted by Laws 1957, ch. 147, § 2; 1989, ch. 104, § 2.

ANNOTATIONS

Bracketed material. — The bracketed material was inserted by the compiler and is not part of the law.

47-1-51. Plane coordinates, x and y; definition.

The plane coordinates of a point on the earth's surface, to be used in expressing the position or location of the point in the appropriate zone of this system, shall consist of two distances, expressed in US survey feet and decimals of a US survey foot when using the New Mexico coordinate system of 1927 and expressed in meters and decimals of a meter when using the New Mexico coordinate system of 1983 and New Mexico coordinate system of 2022. 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. These coordinates shall be made to depend upon and conform to the coordinates, on the New Mexico coordinate system, of the horizontal control stations of the ~~national ocean survey~~ National Ocean Service (NOS) and ~~national geodetic survey~~ National Geodetic Survey (NGS) within the state, as those coordinates have been determined by the survey. When referencing the X and Y coordinates within the zones of the New Mexico Coordinate System of 1983, meters and U.S. survey feet shall be used. When referencing the X and Y coordinates within the zones of the New Mexico Coordinate System of 2022, meters and international feet shall be used. The length of one U.S. survey foot expressed in meters is equal to 1200 divided by 3937 exactly. The length of one international foot expressed in meters is equal to 0.3048 exactly, as defined by the National Institute of Standards and Technology (NIST). Exact U.S. customary definitions based on the U.S. survey foot such as but not limited to the chain, link,

mile, rod, yard, acre, acre-foot, and square mile shall remain to be based on the U.S. survey foot, per their original definition.

History: 1953 Comp., § 70-1-49, enacted by Laws 1957, ch. 147, § 3; 1989, ch. 104, § 3.

47-1-52. Description of land located in more than one zone.

When any tract of land to be defined by a single description extends from one into another of the coordinate zones as provided in Section 47-1-49 NMSA 1978, the positions of all points on its boundaries may be referred to either of the zones; the zone which is used shall be specifically named in the description.

History: 1953 Comp., § 70-1-50, enacted by Laws 1957, ch. 147, § 4; 1989, ch. 104, § 4.

ANNOTATIONS

Am. Jur. 2d, A.L.R. and C.J.S. references. — 26 C.J.S. Deeds § 29.

47-1-53. Definition of coordinate system according to U.S. coast and geodetic survey [national ocean survey and national geodetic survey].

A. For purposes of more precisely defining the New Mexico coordinate system of 1927 and 1983, the following definition by the ~~national ocean survey~~ National Ocean Service (NOS) and ~~national geodetic survey~~ National Geodetic Survey (NGS) is adopted:

(1) the New Mexico coordinate system, east zone, is a transverse mercator projection having a central meridian 104° 20' west of Greenwich, on which meridian the scale is set at one part in 11,000 too small. The origin of coordinates is at the intersection of the meridian 104° 20' west of Greenwich and the parallel 31° 00' north latitude;

(2) the New Mexico coordinate system, central zone, is a transverse mercator projection having a central meridian 106° 15' west of Greenwich, on which meridian the scale is set at one part in 10,000 too small. The origin of coordinates is at the intersection of the meridian 106° 15' west of Greenwich and the parallel 31° 00' north latitude;

(3) the New Mexico coordinate system, west zone, is a transverse mercator projection having a central meridian 107° 50' west of Greenwich, on which meridian the scale is set at one part in 12,000 too small. The origin of coordinates is at the intersection of the meridian 107° 50' west of Greenwich and the parallel 31° 00' north latitude; and

(4) the origin for each zone is assigned the coordinates: x = 500,000 U.S. survey feet and y = 0 U.S. survey feet for the New Mexico coordinate system of 1927. The origin for the east zone is assigned to the coordinates: x = 165,000 meters and y = 0 meters, for the central zone x = 500,000 meters and y = 0 meters and for the west zone x = 830,000 meters and y = 0 meters for the New Mexico coordinate system of 1983.

B. For purposes of more precisely defining the New Mexico coordinate system of 2022, the following definitions by the National Oceanic and Atmospheric Administration and National Geodetic Survey is adopted:

(1) the New Mexico coordinate system, New Mexico zone uses the North American Terrestrial Reference Frame of 2022 (NATRF2022) and is a transverse mercator projection having a central meridian 106° 00' west of Greenwich, on which meridian the scale is set at 0.999800. The origin of coordinates is at the intersection of the meridian 106° 00' west of Greenwich and the parallel 29° 00' north latitude;

(2) the New Mexico coordinate system, east zone uses the North American Terrestrial Reference Frame of 2022 (NATRF2022) and is a transverse mercator projection having a central meridian 104° 03' west of Greenwich, on which meridian the scale is set at 1.000150. The origin of coordinates is at the intersection of the meridian 104° 03' west of Greenwich and the parallel 30° 30' north latitude;

(3) the New Mexico coordinate system, central zone uses the North American Terrestrial Reference Frame of 2022 (NATRF2022) and is a transverse mercator projection having a central meridian 106° 06' west of Greenwich, on which meridian the scale is set at 1.000200. The origin of coordinates is at the intersection of the meridian 106° 06' west of Greenwich and the parallel 30° 30' north latitude;

(4) the New Mexico coordinate system, west zone uses the North American Terrestrial Reference Frame of 2022 (NATRF2022) and is a transverse mercator projection having a central meridian 107° 45' west of Greenwich, on which meridian the scale is set at 1.000180. The origin of coordinates is at the intersection of the meridian 107° 45' west of Greenwich and the parallel 30° 30' north latitude;

(5) The zone origins of the New Mexico coordinate system 2022 are assigned the following coordinates:

a) New Mexico zone x = 1,219,200 meters and y = 0 meters.

b) east zone x = 914,400 meters and y = 0 meters.

c) central zone x = 914,400 meters and y = 0 meters.

d) west zone x = 914,400 meters and y = 0 meters.

~~B~~C. The position of the New Mexico coordinate system shall be as marked on the ground by horizontal control stations established in conformity with standards adopted by ~~national ocean survey~~ National Ocean Service (NOS) and ~~national geodetic survey~~ National Geodetic Survey (NGS) for first-order, second-order and third-order work, whose geodetic positions have been rigidly adjusted on the North American datum of 1927, ~~or of~~ the North American datum of 1983,

or the National Terrestrial Reference Frame of 2022, and whose coordinates have been computed on the system defined in this section. Any such station may be used for establishing a survey connection with the New Mexico coordinate system.

History: 1953 Comp., § 70-1-51, enacted by Laws 1957, ch. 147, § 5; 1989, ch. 104, § 5.

ANNOTATIONS

Bracketed material. — The bracketed material was inserted by the compiler and is not part of the law.

Am. Jur. 2d, A.L.R. and C.J.S. references. — Description in deed as relating to magnetic or true meridian, 70 A.L.R.3d 1220.

47-1-54. Recordation of land description based on coordinate system; limitation.

~~No coordinates based on the New Mexico coordinate system, purporting to define the position of a point on a land boundary, shall be presented to be recorded in any public land records or deed records unless such point is within eight kilometers of a monumented horizontal control station established by and for and for which coordinate data has been published by an agency of the state of New Mexico or a political subdivision of the state or established in conformity with the standards of accuracy and specifications for first-, second- or third- order geodetic surveying as prepared and published by the federal geodetic control committee of the United States department of commerce. Standards and specifications of the federal geodetic control committee or its successor in force on the date of the geodetic survey shall apply. The publication of the existing control stations, or the acceptance with intent to publish the newly established control stations by the national ocean survey and national geodetic survey, shall constitute evidence of adherence to the federal geodetic control committee's specifications. The limitations of this section may be further modified by the secretary of highway and transportation.~~

No coordinates based on the New Mexico coordinate system, purporting to define the position of a point on a land boundary, shall be presented to be recorded in any public land records or deed records unless such point was determined by a qualified person pursuant to 16.39.5.10 NMAC.

History: 1953 Comp., § 70-1-52, enacted by Laws 1957, ch. 147, § 6; 1970, ch. 36, § 1; 1977, ch. 247, § 180; 1989, ch. 104, § 6.

47-1-55. [Use on maps, reports of survey or other documents.]

The use of the term "New Mexico coordinate system" on any map, report of survey or other document, shall be limited to coordinates based on the New Mexico coordinate system as defined.

History: 1953 Comp., § 70-1-53, enacted by Laws 1957, ch. 147, § 7.

ANNOTATIONS

Cross references. — For void indemnity agreements, *see* 56-7-1 NMSA 1978.

Am. Jur. 2d, A.L.R. and C.J.S. references. — Conveyance of lot with reference to map or plat as giving purchaser rights in indicated streets, alleys or areas not abutting his lot, 7 A.L.R.2d 607.

47-1-56. Use of coordinate system.

For the purpose of describing the location of any survey station or land boundary corner in the state of New Mexico, it shall be considered a complete, legal and satisfactory description of such location to give the position of said survey state or land boundary corner on the system of coordinates defined in Sections 47-1-49 through 47-1-56 NMSA 1978.

Nothing contained in those sections shall require a purchaser or mortgagee of real property to rely wholly on a land description, any part of which depends exclusively upon the New Mexico coordinate system.

Where conflicts arise in the location of a corner or other boundary element when such corner or element's location is described in both the conventional system and the New Mexico coordinate system, the description providing the most certain location shall be used.

History: 1978 Comp., § 47-1-56, enacted by Laws 1989, ch. 104, § 7.

ANNOTATIONS

Repeals and reenactments. — Laws 1989, ch. 104, § 7 repealed former 47-1-56 NMSA 1978, as enacted by Laws 1957, ch. 147, § 8, relating to construction of description by coordinates as supplemental, and enacted a new section, effective June 16, 1989.

Severability. — Laws 1989, ch. 104, § 8 provided for the severability of the act if any part or application thereof is held invalid.

Am. Jur. 2d, A.L.R. and C.J.S. references. — Description of land conveyed by reference to river or stream as carrying to thread or center or only to bank thereof - modern status, 78 A.L.R.3d 604.