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PUBLIC RESOURCES CODE - PRC**DIVISION 8. SURVEYING AND MAPPING [8801 - 8902]** (Division 8 added by Stats. 1953, Ch. 108.)**CHAPTER 4. California Geodetic Coordinates [8870 - 8880]** (Chapter 4 added by Stats. 2005, Ch. 158, Sec. 29.15.)

8870. Geodetic coordinates within the State of California that are based on the North American Datum of 1983 and conforming to the provisions of this chapter shall be known as "California Geodetic Coordinates of 1983."

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)

8871. As used in this chapter:

- (a) "NGS" means National Geodetic Survey or its successor.
- (b) "CSRC" means California Spatial Reference Center or its successor.
- (c) "NAD83" means North American Datum of 1983.
- (d) "GPS" means Global Positioning System and includes other, similar spaced-based systems.
- (e) "FGDC" means the Federal Geographic Data Committee or its successor.
- (f) "FGCS" means the Federal Geodetic Control Subcommittee or its successor.
- (g) "CSRN" means California Spatial Reference Network as defined by Chapter 3 (commencing with Section 8850), "Geodetic Datums and the California Spatial Reference Network."
- (h) "CGC83" means California Geodetic Coordinates of 1983.

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)

8872. The phrase "California Geodetic Coordinates of 1983" or any abbreviation thereof, such as "CGC83," shall be used only in reference to geodetic coordinates based on NAD83 and conforming to the provisions of this chapter.

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)

8873. CGC83 values shall be expressed as latitude, longitude, or ellipsoid height values or as Cartesian coordinates (x, y, z). When Cartesian coordinates are used, the symbols and conventions utilized shall be the same as that used by NGS.

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)

8874. CGC83 latitude and longitude values shall be expressed in degrees, minutes, seconds, and decimals of a second, or degrees and decimals of a degree. CGC83 ellipsoid height values shall be expressed in meters and decimals of a meter or feet and decimals of a foot. When ellipsoid height values are expressed in feet, the "U.S. Survey Foot" (one foot equals 1200/3937 meters) shall be used as the standard foot. CGC83 Cartesian coordinate values shall be expressed in meters and decimals of a meter.

When CGC83 values are stated on any document, the unit of measure shall be clearly stated.

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)

8875. The survey that establishes a CGC83 value or values shall meet all of the following requirements:

- (a) The survey shall be referenced to and shall have field-observed statistically independent connections to one or more appropriate reference stations that is one of the following:

- (1) CSRN station.

(2) Geodetic control station located outside of the State of California that meets all the requirements for inclusion in the CSRN except that the station is outside California.

(3) Existing CGC83 station that:

(A) Is shown on a map filed with the applicable county surveyor by a public officer, subdivision map, corner record, or record of survey.

(B) Meets all the requirements for inclusion in the CSRN except that the station and its data are not published by NGS or CSRC.

(C) Has an accuracy, conforming to the applicable CSRN requirements, stated for the station's value.

(4) Existing CGC83 station that is shown on a public map or document that:

(A) Is compiled and maintained by the applicable county surveyor.

(B) Meets all the requirements for inclusion in the CSRN except that the station and its data are not published by NGS or CSRC.

(C) Has an accuracy, conforming to the applicable CSRN requirements, stated for the station's value.

(b) If an accuracy is to be claimed for the CGC83 value or values established, the claimed accuracy shall be an accuracy standard published by FGDC or FGCS.

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)

8876. If an accuracy is claimed for a CGC83 value or values, the survey that established the value or values shall be documented on a map, record of survey, corner record, or other document that includes, at a minimum, the following:

(a) For each CGC83 station, the resultant CGC83 value or values.

(b) The epoch (date), in a decimal year format to two decimal places, that is the basis of the CGC83 values shown. The epoch shall be the published NGS or CSRC epoch of a controlling station for the survey.

If the published epochs for the horizontal positions of the controlling stations are not the same, appropriate adjustments shall be made to the horizontal values of the controlling stations so that said values of all the controlling stations are at one consistent epoch published by NGS or CSRC. These adjustments in the coordinates of the controlling stations shall be made in accordance with procedures and values published by NGS or CSRC.

(c) The FGDC and FGCS accuracy standard of the CGC83 value or values established. FGDC accuracies shall be identified as either a local or network accuracy.

(d) Additional written data that justifies the FGDC or FGCS accuracy standard shown. Such additional written data shall include observation equipment, control diagram including required field-observed statistically independent connection or connections, adjustment methodology and software used, a summary of the procedures used or a reference to published commonly accepted procedural specifications, final residuals or closures, and other data essential for others to evaluate the survey.

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)

8877. When a CGC83 value or values are shown on any document, the document shall include the following:

(a) A statement that the geodetic coordinate value or values shown are a CGC83 value or values; exceptions shall be noted.

(b) The station or stations to which the CGC83 value or values are referenced and connected and the geodetic coordinate value or values and the published or stated accuracy or accuracies of said reference station or stations.

(c) The epoch of the CGC83 value or values shown. The epoch shall conform to provisions of subdivision (b) of Section 8876.

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)

8878. The use of CGC83 by any person, firm, or governmental agency is optional.

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)

8879. This chapter does not impair or invalidate land titles, legal descriptions, or jurisdictional or land boundaries and, further, this chapter does not impair or invalidate references to, or the use of, datums or latitude, longitude, or ellipsoid height values or other geodetic coordinate values that do not conform to this chapter except as specified in Section 8872.

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)

8880. This chapter does not prohibit the use of new surveying technologies or techniques for which FGCS specifications or other accepted specifications have not yet been published.

(Added by Stats. 2005, Ch. 158, Sec. 29.15. Effective January 1, 2006.)