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Recommendation WG 3.92.036

COORDINATE CONVERSION to NAD83 DATUM
and
ELEVATION CONVERSION to NAVD88 DATUM

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January 1993   Source: Working Group 3

RECOMMENDATION

Subject: Coordination Procedures

Title: Coordinate conversion to NAD83 Datum and elevation conversion to NAVD88 Datum

Background:

The FAA and FCC have historically used the North American Datum of 1927 (NAD27) as the basis for specifying latitudes and longitudes. The recently-developed NAD83 system is a more accurate and consistent reference system that was adopted as the official system of the United States in 1989.

The FAA announced on May 11, 1992 that they would convert to this new system on October 15, 1992. All FAA applications (FAA Form 7460-1) must now specify whether NAD27 or NAD83 coordinates are being submitted.

The government's NADCON program, which converts NAD27/NAD83 coordinates, is the recommended way of doing that conversion. To get NAD27 coordinates when using a GPS device, the coordinates should be read in NAD83 and converted to NAD27 with the NADCON program. The GPS device should not be set to read NAD27 because the internal conversion is not as accurate as the program.

At the suggestion of the FCC a vertical data system recommendation should be a part of this recommendation. The National Geodetic Vertical Datum of 1929, NGVD29, corresponds to the NAD27 that's on the USGS topo maps. The new system, the North American Vertical Datum of 1988, NAVD88, corresponds to the NAD83 system. As with the latitude and longitude, if the GPS device shows the elevation in the 1988 system, the VERTCON program should be used to convert it back to 1929 system.

Recommendation:

Until the FCC "announcement" date, all coordinates in prior coordination notices are to be specified in NAD27 values and all elevations should be specified in NGVD29 values. During the period between the FCC "announcement" date and for one year following the "conversion" date, all prior coordination notices are to clearly indicate which coordinate and elevation values are used. The coordinate system and elevation type identifier should appear on the cover letter and each data sheet.

When using a GPS device the coordinates should be read in NAD83 and converted to NAD27 using the NADCON program. When using a GPS device the elevation should be read as NAVD88and converted to NGVD29 using the VERTCON program. After the FCC "conversion" date, all coordinates and elevations in prior coordination notices are to be specified in NAD83 and NGVD88 values.

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