FEDERAL REGISTER, VOL. 42, NO.57 - THURSDAY, MARCH 24, 1977, pp. 15943-15944

National Oceanic and Atmospheric Administration

NATIONAL OCEAN AND GEODETIC SURVEYS

Policy on Publication of Plane Coordinates

The National Ocean Survey, National Geodetic Survey determined it is in the best interest of the surveying and mapping community that two plane coordinate systems be published and supported beginning in 1983 with the North American Datum redefinition. These two systems will be identified as the “State Plane Coordinate” (SPC) and the “Universal Transverse Mercator” (UTM) systems.

The UTM system will consist of the transverse Mercator projection as defined in Chapter 1 of the 1958 Department of Army Technical Manual TM5-241-8, changing only the definition of the datum. The SPC will consist of the same projections and defining parameters as published in USC&GS Special Publication 235 (1974 revision) and legally adopted in 35 states, except for the following changes:

1. The grid will be marked on the ground using the 1983 NAD.
2. Distances from the origin will be expressed in meters and fractions thereof. One additional decimal place should be used for the metric expression of a value previously expressed in feet.
3. The arbitrary numeric constant, presently assigned to the origin, will be unchanged but will be considered as meters instead of feet, except for the following: If a state elects to have a different constant(s) assigned to the origin so that the 1983 NAD plane coordinates will appear significantly different from the 1927 NAD positions, when considering the overall system, then the National Geodetic Survey will consider changing the origin constant. If the state so elects, it must amend its legislation to accommodate this change.
4. Michigan’s transverse Mercator systems will be eliminated in favor of the legislatively approved Lambert system.
5. Projection equations will be programmed such that the maximum computing error of a coordinate will never exceed 0.1 mm when computing the coordinate of a point with the zone boundaries.

A supplementary publication of SPC constants will not be published until 1982 to allow sufficient time for state legislative action.

These state amendments will be based upon the desires and needs within the states, recommendations of the National Geodetic Survey, and among other things will consider the following items.

1. Refinements to eliminate:
a. Negative “Y” coordinates for certain islands on the Maine east zone.
b. Negative “X” coordinates for points on the Dry Tortugas on the Florida east zone.
c. Negative “Y” coordinates for some offshore points on the Louisiana south zone.
d. Zone boundary in the State of Washington passing through Grant County following latitude 47 30 rather than the county boundary.
e. Negative “X” coordinates for some points on Mona Island and vicinity west of Puerto Rico.
2. Urbanization that requires either different parameters for existing zones or additional zones such that a metropolitan area would be located in a single zone. For example:
a. New York City
b. Chicago
c. Cincinnati
d. Washington, D.C.
3. A change in the arbitrary origin as discussed above. This can be accomplished in most cases by:
a. Changing the “X” coordinate constant of 500,000 to 300,000 or 700,000 where the transverse Mercator is used, or change the “X” coordinate constant of 2,000,000 to 4,000,000 where the Lambert is used.
b. Changing the “Y” coordinate constant of zero of 500,000 to 1,000,000.
c. Changing both “X” and “Y”

The National Geodetic Survey will not change projection defining parameters in states that have legally adopted the SPC system until the state amends its legislation.

Dated March 18, 1977.

T. P. Gleiter
Assistant Administrator
for Administration

[FR Doc. 77-8947 Filed 3-23-77:8:45 am]