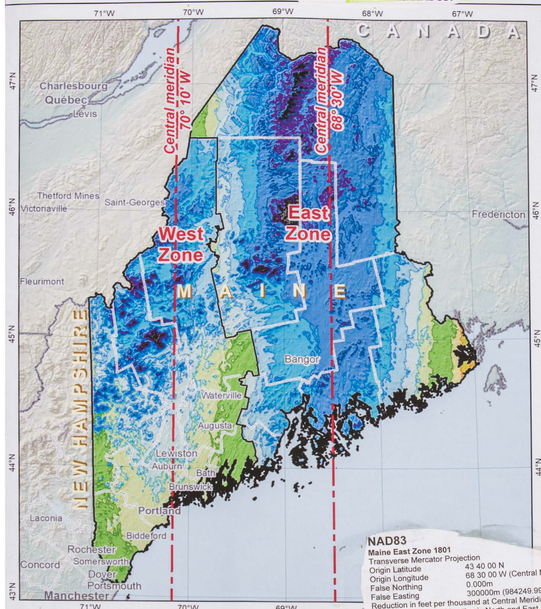
ORIGINAL 1930'S 2-ZONE PROJECTIONS

When we did 1:6,000 Transit and Tape Surveys, the 2-Zone System worked well, both in NAD27 and NAD83.



Existing SPCS 83 designs:

Maine

Both existing zones

NOAA's National Geodetic Survey

Transverse Mercator projections

North American Datum of 1983

Cen meridian (East): 68° 30' W
CM scale (East): 0.999 9 (exact)
Cen meridian (West): 70° 10' W
CM scale (West): 0.999 966 667...

Areas within ±30 ppm distortion (1:33,333 = ±0.16 ft per mile):
41% of population
26% of all cities and towns
12% of entire combined zone area

Distortion values (ppm)

All zones:	*Cities and towns:*
Min = -325	Min, Max = -144, +78
Max = +87	Range = 223
Range = 413	Mean = -45
Mean = -83	(weighted by population)

Linear distortion at topographic surface (parts per million)

<-160	to -80	to +60
to -160	to -60	to +80
to -140	to -40	to +100
to -120	±20	to +120
to -100	to +40	>+120

0 50 100 150 200 km

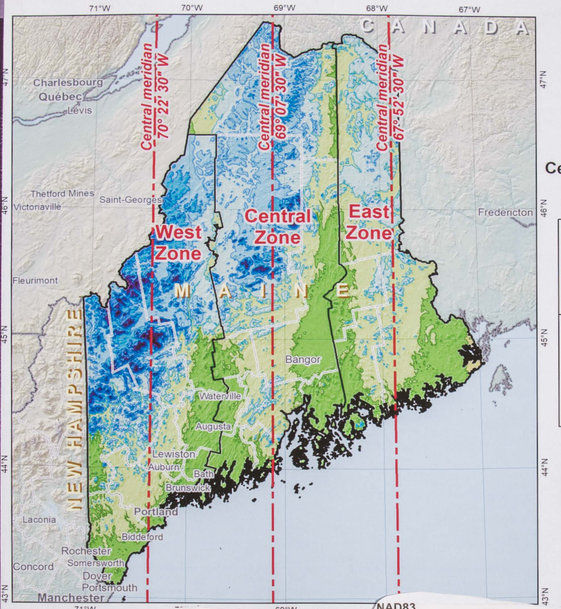
Created 01/27/2019

NAD83
Maine West Zone 1802
Transverse Mercator Projection
Origin Latitude 42 50 00 N
Origin Longitude 70 10 00 W (Central Meridian)
False Northing 0.000m
False Easting 900000.000 (29,527,500.000sFT)
Reduction in feet per thousand at Central Meridian: 0.0333...
Positive Coordinate Direction is North and East
SF: 0.99996666667
1:30,000 Maximum Distortion at Central Meridian

NAD83
Maine East Zone 1801
Transverse Mercator Projection
Origin Latitude 43 40 00 N
Origin Longitude 68 30 00 W (Central Meridian)
False Northing 0.000m
False Easting 300000m (984249.999...sFT)
Reduction in feet per thousand at Central Meridian: 0.1
Positive Coordinate Direction is North and East
SF: 0.9999
1:10,000 Maximum Distortion at Central Meridian

ME2000 3-ZONE PROJECTIONS (IN USE)

When Electronic Distance Measuring Equipment became available to surveyors, and then Total Stations.



Existing ME2000 designs:

Maine

All three existing zones

NOAA's National Geodetic Survey

Transverse Mercator projections

North American Datum of 1983

Cen meridian (East): 67° 52' 30" W
Cen meridian (Central): 69° 07' 30" W
Cen meridian (West): 70° 22' 30"W
Cen merid scale (all): 0.999 98 (exact)

Areas within ±30 ppm distortion (1:33,333 = ±0.16 ft per mile):
88% of population
68% of all cities and towns
37% of entire combined zone area

Distortion values (ppm)

All zones:	*Cities and towns:*
Min = -256	Min, Max = -89, +43
Max = +48	Range = 132
Range = 304	Mean = -14
Mean = -42	(weighted by population)

Linear distortion at topographic surface (parts per million)

<-160	to -80	to +60
to -160	to -60	to +80
to -140	to -40	to +100
to -120	±20	to +120
to -100	to +40	>+120

0 50 100 150 200 km

Created 01/27/20

NAD83
ME2000 WEST ZONE 1813
Transverse Mercator Projection
Origin Latitude 42 50 00 N
Origin Longitude 70 22 30 W (Central Meridian)
False Northing 0.000m
False Easting 300000.000m (984,249.999...sFT)
Reduction in feet per thousand at Central Meridian: 0.02
Positive Coordinate Direction is North and East
SF: 0.99998
1:50,000 Maximum Distortion at Central Meridian

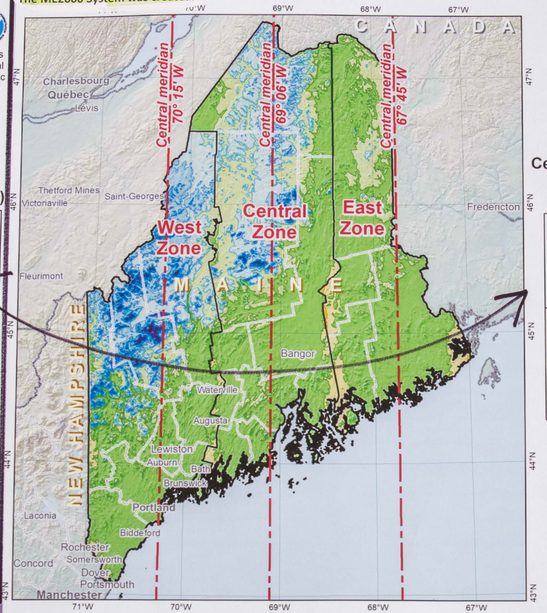
NAD83
ME2000 CENTRAL ZONE 1812
Transverse Mercator Projection
Origin Latitude 43 30 00 N
Origin Longitude 69 07 30 W (Central Meridian)
False Northing 0.000m
False Easting 500000.000m (1,640,416.666...sFT)
Reduction in feet per thousand at Central Meridian: 0.02
Positive Coordinate Direction is North and East
SF: 0.99998
1:50,000 Maximum Distortion at Central Meridian

NAD83
ME2000 EAST ZONE 1811
Transverse Mercator
Origin Latitude 43 50 00 N
Origin Longitude 67 52 30 W (Central Meridian)
False Northing 0.000m
False Easting 700000.000m (2,296,583.333...sFT)
Reduction in feet per thousand at Central Meridian: 0.02
Positive Coordinate Direction is North and East
SF: 0.99998
1:50,000 Maximum Distortion at Central Meridian

(MODIFIED BY NGS) 3-ZONE PROJECTION

Surveyors needed a plane coordinate projection the more closely aligned Grid Distances to Ground Distances that a better projection was needed. The ME2000 System was created.

BETTER
GOOD COVERAGE



Preliminary SPCS2022 default designs:

Maine

All three proposed zones

NOAA's National Geodetic Survey

Transverse Mercator projections

North American Terrestrial Reference Frame of 2022

Cen meridian (East): 67° 45' W
Cen meridian (Central): 69° 06' W
Cen meridian (West): 70° 15' W
Cen merid scale (all): 1.000 00 (exact)

Areas within ±30 ppm distortion (1:33,333 = ±0.16 ft per mile):
98% of population
93% of all cities and towns
65% of entire combined zone area

Distortion values (ppm)

All zones:	*Cities and towns:*
Min = -236	Min, Max = -73, +47
Max = +52	Range = 120
Range = 288	Mean = +5
Mean = -21	(weighted by population)

Linear distortion at topographic surface (parts per million)

<-160	to -80	to +60
to -160	to -60	to +80
to -140	to -40	to +100
to -120	±20	to +120
to -100	to +40	>+120

0 50 100 150 200 km

Created 01/27/20