

Homework #2 – JOE BREW (UFID: 0402-8902)

Please refer to lecture 2 tutorials and its geodatabase to answer the following questions.

1. What are the coordinate systems in each of the datasets and the feature classes which are not in a dataset?

Alachua Dataset:

GCS_North_American_1983 (Projected: NAD_1983_StatePlane_Florida_North_FIPS_0903_Feet)

Florida Dataset:

GCS_North_American_1983 (Projected: PCS_Albers)

USA Dataset:

GCS_WGS_1984

World Dataset:

GCS_WGS_1984

Alachua_Blockgroup feature class:

None given, so I defined projection as GCS_North_American_1983 (imported from USA dataset)

Hospital_wrongprj feature class:

GCS_WGS_1984 (Projected: WGS_1984_UTM_Zone_17N)

2. What was wrong of the coordinate system information in the data layer “hospital_wrongprj”?

It was incorrectly given in the transverse Mercator projection (WGS_1984_UTM_Zone_17N), when in reality, the coordinates are latitude and longitude. Accordingly, it should be given the WGS 1984 geographic coordinate system.

3. You have a choice between “Geographic Coordinate System” and “Projected Coordinate System” for “Hospital_wrongprj” layer, which one should be chosen and why?

In this case, one should choose a geographic coordinate system. That is because these data are in a 3d representation using latitude and longitude.

4. What is the X, Y Coordinate of the hospital in UTM 17N coordinate system?

There are multiple hospitals in this coordinate system. In latitude and longitude, they are as follows:

COUNTY	FACILITY	LATITUDE	LONGITUD
ALACHU	NORTH FLORIDA EVALUATION AND TREATMENT C	294216	0822144
ALACHU	SUNLAND HOSPITAL UNIT	294008	0821739
ALACHU	SUNLAND TRAINING CENTER (STATE HOSPITAL)	294008	0821739
ALACHU	NORTH FLORIDA REGIONAL HOSPITAL	293940	0822441
ALACHU	ALACHUA GENERAL HOSPITAL	293854	0822003
ALACHU	SHANDS TEACHING HOSPITAL AND CLINIC	293823	0822037
ALACHU	VETERANS ADMINISTRATION HOSPITAL	293813	0822042

Once we convert the projection to the UTM 17N coordinate system, we can see that the coordinates are quite different:

Extent

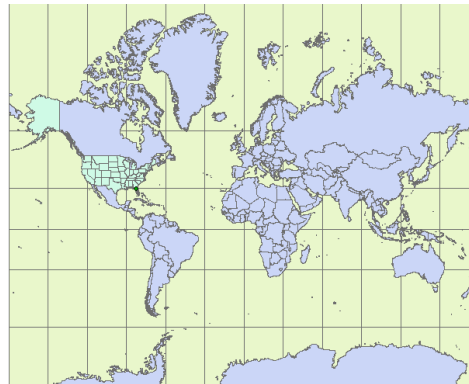
Top: 3286834.307500 m

Left: 363423.360500 m

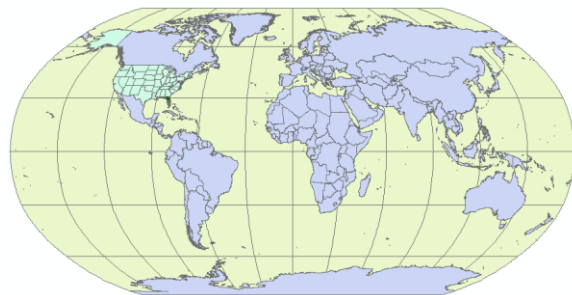
Right: 374777.116800 m

Bottom: 3279334.850900 m

5. Make a screen shot to show the correct locations of hospitals in Alachua County.



6. Make a screen shot for the Robinson Projection



7. Make a screen shot for another different projection of your choice;
Winkle 1world



8. Make a screen shot of yourlastname projection.



