**Solution to NFIE-Geo Exercise**

*(1) Prepare a nice map showing the Travis County NFIE-Geo database.*

*
Map prepared by Cyndi Castro.*

*(2) How many Subwatersheds are in this database?* ***42***

*How many Catchments?* ***911***

 *How many Flowlines?* ***917***

*How many catchments are there in a Subwatershed, on average?* ***Average = 911/42 = 21.69, or 22 approximately.***

*(3) What is the average area (km2) of the Subwatersheds and of the Catchments? The map units are in feet so you’ll need to do some conversions here.*

**

For the **subwatersheds**, the average area = 1,239,237,271 ft2, and converting this to km2 using 1 km2 = 1.06739 x 107 ft2, the average area of the subwatersheds = **116.10 km2**.



For the **Catchments**, the average area = 57,135,961 ft2, and converting this to km2 using 1 km2 = 1.06739 x 107 ft2, the average area of the Catchments = **5.35 km2**.

 *(4) What is the average length of the MFlowlines (km)?*

The LengthGeo attribute is the length of the flowlines in km as determined from the original NHDPlus dataset, and the following statistics table shows that the average value is **3.1 km**. Another way to do this is from the shape\_length attribute, which shows that the average length is 10158 ft, and converting this to km using 1 km = 3280.84 ft, the resulting average length is **3.1km**, which is the same result as before.



