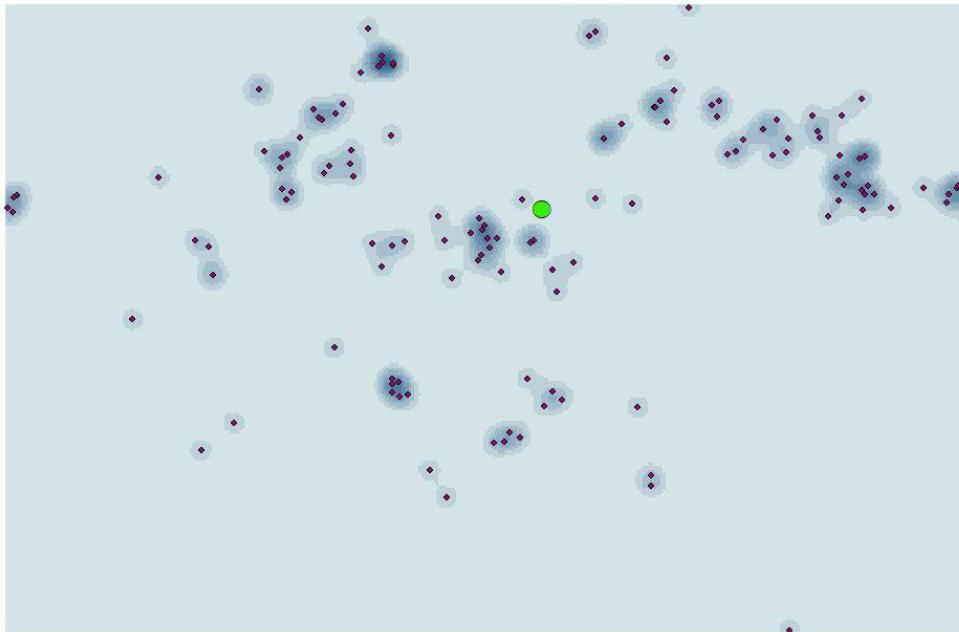
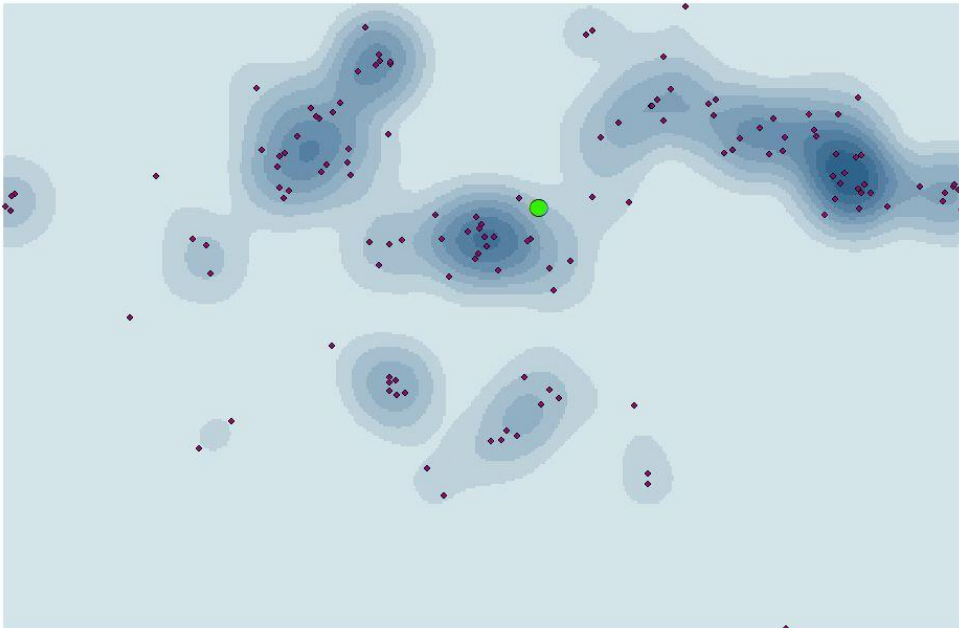


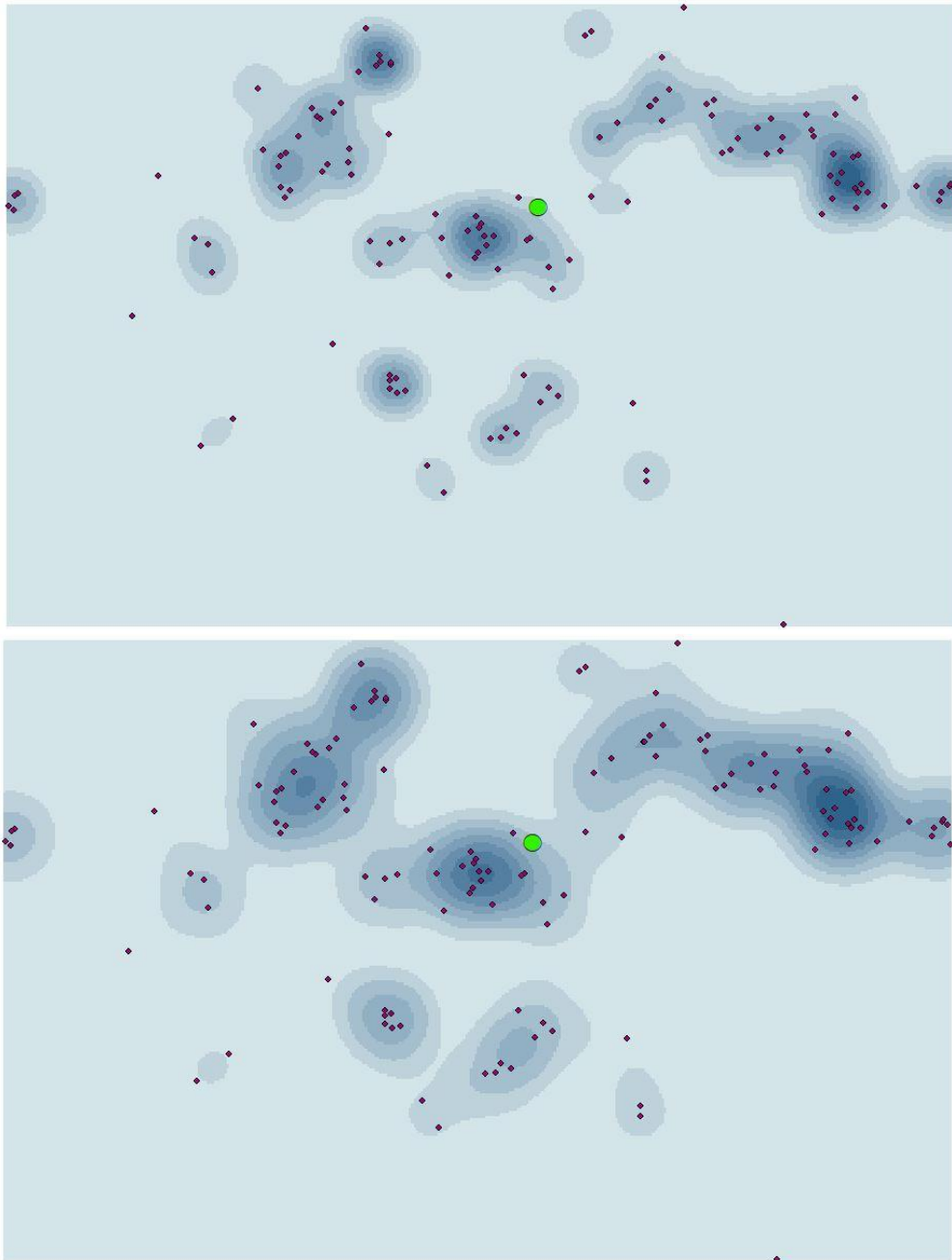
Jason Griffin
Geog 579
Lab 3
7/11/2021

1. Used the projected coordinate system WGS 1984 UTM Zone 17N. We can see that the majority of the crimes are within the first standard deviation and the rest of the reported crimes are within the second sd. There are many clusters within the from the mean center. The mean center is 587840.758602, 4477954.497004. The first standard distance is 5278.775939. The second standard distance is 10557.551879.



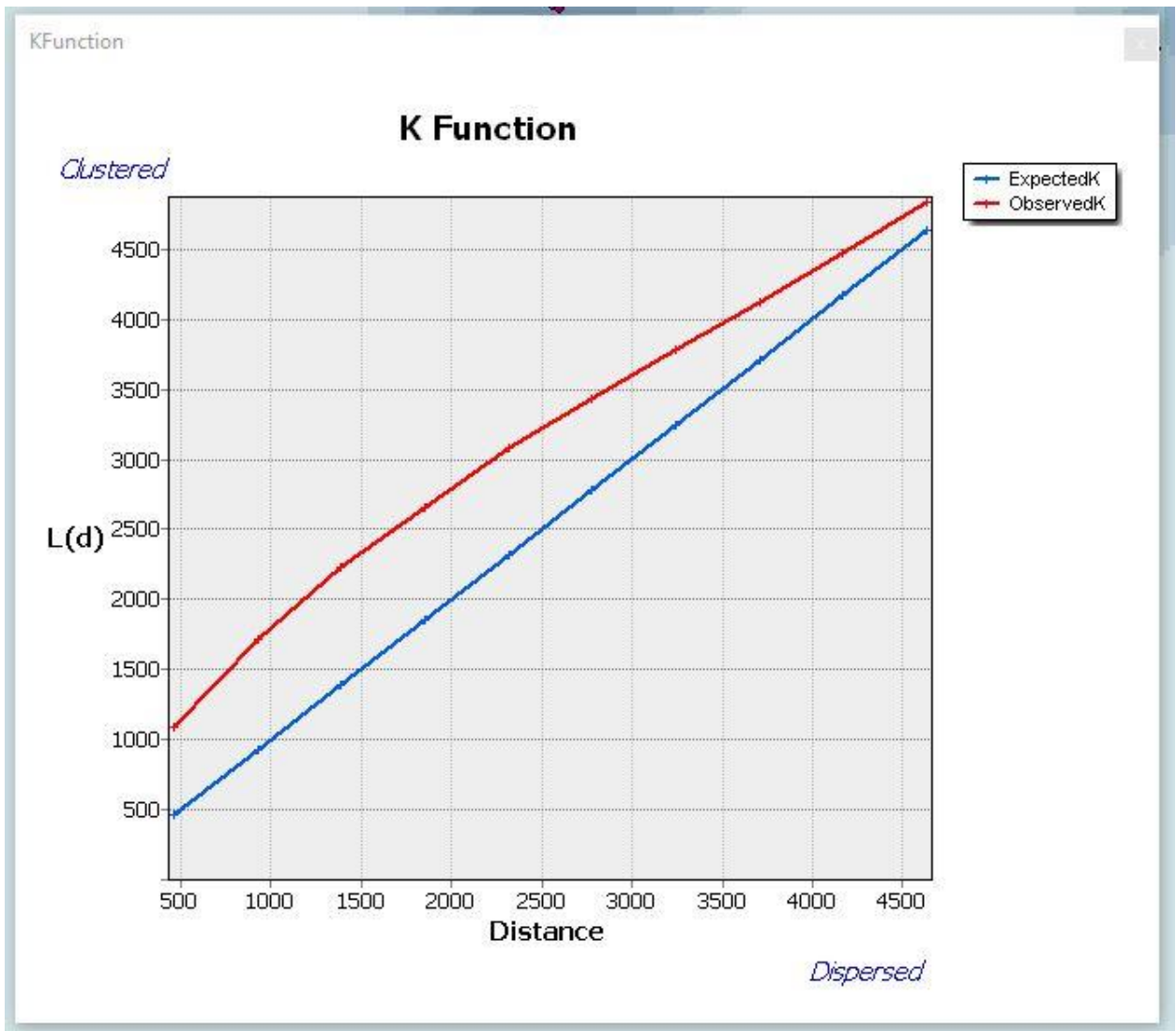
2.





In order is the 500m, 800m, 1000m, 1500m. As the bandwidth increases it looks like the number of clusters is fewer but the crimes are incorporated into the range of the clusters.

3. Mean Nearest Neighbor; Observed Mean Distance: 310.363801, Expected Mean Distance: 608.555950, Nearest Neighbor Ratio: 0.51, z-score: -11.209716.
The mean nearest neighbor distance is the average distances of the points to their nearest neighbors. The smaller the distance shows that points are closer to each other as a whole.



4. I am still trying to understand this concept and would like to talk to you more about this. But from the graph it appears that the observed K is greater than the expected so that the crimes are clustered. From about 1400m distance is the highest point of the ark of the observed K and difference from the expected K value. If I am understanding this correctly, that means the strength of clustering is more at that distance. As the distance increases the observed K is getting closer to the expected K and the crimes are becoming more random.