Summer Research Summary

This summer I have been doing research through the Department of Geology, Geography, and Environmental Studies, with faculty adviser Deanna van Dijk. I am part of a group of dune researchers working on various projects relating to human impact on dunes and the teaching of research methods to first year students. My focus has been the human impacts on a dune area in Van Buren County, which we have been calling the Syndicate Park Dune Area. This dune area is advancing inland, burying houses and threatening others. Because Van Buren County owns most of the dune area, the Van Buren County Commission requested that a study be done on this area, and Dr. van Dijk asked if I would be willing to do it. I have been working with one other person on this project whose focus was the physical characteristics of the dune area.

My focus within the project was assessing human activities on the dune area and visitor and resident perceptions of the dune area. My research questions on this project were straightforward. They were:

1) What are the human activities on the dune area?
2) What are the visitor and resident perceptions of possible management of the dune area?
3) Based on the answers to the previous questions, what are some recommendations for the management of human impacts on the dune area?

My objectives for answering these questions were also quite straightforward. In order to answer the first question, I simply observed the activities of visitors and residents on the dune area. Every time I visited the site, I kept a log of what we observed on the dune area. I kept this log in my field notebook.

To answer the second question, I created two questionnaires, one to hand out to visitors, and one to hand out to residents. After submitting the two questionnaires to the Institutional Review Board and getting them approved, I was able to start handing them out. In order to avoid bias in the results, the time periods for administration of the questionnaires were chosen randomly. The results were then coded and analyzed statistically in order to look for significant relationships and patterns.

The third question is not quite answered yet, as I have one more week to go in my research. The answer will only come after complete analysis of the data gathered from answering the first two questions. There will a literature review of other reports written on other sites where management has been emplaced. There will also be comparison of human data to the physical characteristics of the dune area. Possible options for management are controlling or limiting human access to the dune area, placement of sand fencing, and planting of dune grass.

Research this summer has been a great opportunity for me to gain experience related to my chosen field of geology. Not only is it a great summer job, it also is a window into the academic research that I can expect as I move further into my education. I am extremely thankful for this opportunity to engage in real scientific research. My experiences this summer will certainly be invaluable in my further education here at Calvin and after I graduate.