Potential Landfill Sites in Atlantic County
Modeling the ACUA Landfill

OBJECTIVE
To identify suitable locations in Atlantic County to construct a landfill based on New Jersey state regulations.

INTRODUCTION
The population in Atlantic County continues to rise, particularly in the three major growth towns of Egg Harbor, Galloway, and Hamilton. Palmers, who produce the most waste, occupy the majority of the landfills in the area. With a growing population, the need for a new landfill to keep up with the waste is crucial.

Today, the existing landfill in Atlantic County is being handled efficiently by the ACUA landfill; however, this landfill has a finite amount of space that will eventually reach capacity. According to the feasibility studies of the ACUA landfill, this site will be able to keep collecting waste until the year 2031 (Grenell Planning). The projected year is based on three landfill expansions being accepted by the NDEP. Without approval of those expansions, the ACUA landfill will be at capacity by the year 2015, only 15 years from now. Currently, the production of waste is exceeded by the ACUA, but since this is new material, there has been a need for a new landfill. In order to find a new location, the ACUA must consider various factors, such as the landfills already present, and the state of the New Jersey. GIS was also utilized to estimate the total area of the two potential landfills.

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CONCLUSION
The ACUA Landfill will continue to collect waste from an increasing population, and a flourishing casino and construction industry in Atlantic County. The ACUA Landfill will eventually cover 120 acres, which will allow the landfill to operate for another 20 – 30 years. The need for another landfill is urgent at present but planning for a future landfill needs to be taken into consideration. The six criteria that were studied illustrated many candidate areas as shown in Figure 7. Site 1 was chosen for its accessibility in the Atlantic County, whereas Site 2 was chosen because the land was currently open. Site 1 and Site 2 both have advantages and disadvantages in comparison. Site 1 would be the better option as there are no restrictions within 300 ft of the proposed landfill. At present, Site 1 is an incineration site for the ACUA Landfill Company, which would require the amount of excavation to be done to only 80 ft, whereas Site 2 will not require excavation. Site 2 also has more land available, 235 acres, whereas Site 1 only has 60 acres. Therefore, Site 2 is a more feasible option for construction of a landfill. The potential candidate sites in this study would have to go under further investigation. Existing species, transportation, sub-surface drainage areas, historical and geological sites, property for recreation, site development costs, and site configuration are among several other factors that are important for the construction of a landfill.