

Potential Landfill Site Identification Matching the ACUA Landfill

PROJECT
To find two suitable locations in Atlantic County to construct a landfill based on New Jersey state regulations.

INTRODUCTION
The population in Atlantic County continues to grow rapidly. The three major growth towns, Cape May, Egg Harbor, Galloway, and Millville, are experiencing a great deal of housing. In addition, the casino industry continues to flourish and generate waste. Today, the waste in Atlantic County is being handled at the ACUA landfill. This landfill has a finite amount of space that will eventually run out, according to studies at the ACUA.

Fleming). The projected year is based on the current expansion proposed by the ACUA. Without approval of these expansions, the ACUA landfill will be at capacity by the year 2019, only 15 years from now. Currently, the production of waste is covered by the ACUA, but once capacity is reached, the landfill will have to be closed. This is why it is important to use a model for the search for a new site. The ACUA landfill operates a state-of-the-art landfill, which will eventually cover 120 acres, in addition to the landfill area, there is also a waste facility, recycling center, and a composting facility. There is enough room for a landfill to operate in accordance with the regulations set by the State of New Jersey, and the ACUA will continue to do so in the future.

Capacity, however, is not the only concern. The landfill must be located in an area that can be used as a model for the search for a new site. The ACUA landfill operates a state-of-the-art landfill, which will eventually cover 120 acres, in addition to the landfill area, there is also a waste facility, recycling center, and a composting facility. There is enough room for a landfill to operate in accordance with the regulations set by the State of New Jersey, and the ACUA will continue to do so in the future.

ACKNOWLEDGEMENTS

This project was completed with the assistance of Dr. Bill Wenzel, Dr. Tom Sarnat of the Atlantic County Utilities Authority (ACUA), and Richard Stockton University students, who provided data collecting and analysis. Special thanks go to Tom Giannetto, former engineer at ACUA, who provided the layout diagrams and data for the landfill. This project was completed with the assistance of Dr. Bill Wenzel, Dr. Tom Sarnat of the Atlantic County Utilities Authority (ACUA), and Richard Stockton University students, who provided data collecting and analysis. Special thanks go to Tom Giannetto, former engineer at ACUA, who provided the layout diagrams and data for the landfill.

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ABSTRACT

This project was devised to determine suitable locations for the construction of a landfill site in Atlantic County. The areas in Atlantic County were evaluated for potential sites.

Industry, residential, and protected land areas were selected and then two potential sites were chosen that contained the required criteria.

The required criteria for a landfill site includes public well sites, wildlife management areas, Pinelands preservation areas, residential land, and

System (GIS), supplemented by aerial photographic images. The two potential landfill sites along with other

public land areas were mapped and the results were used to determine the best location for the landfill.

Mapping of the land areas required for construction, utility infrastructure, and railroad tracks were plotted.

Land areas that have been previously used for landfilling were plotted and removed from the map.

Figure 4 shows the areas that are protected such as the Brant Beach wetland, and Atlantic Beach.

Figure 5 shows the areas that are dedicated to resource and natural resource protection, would include

Figure 6, the landfill site should not be close to any residential land. Aerial photographs were used to

form a composite map (figure 7) showing candidate areas and exclusion areas. Two potential landfill sites were extracted

from the composite map (figure 7) and the results are shown in figure 8.

Figure 9 shows the aerial photograph of the two potential landfill sites.

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