

PROJECT SPOTLIGHT | AIRSPACE VOLUME CALCULATIONS - METRO WASTE AUTHORITY - METRO PARK EAST LANDFILL - MITCHELLVILLE, IOWA

SCOPE OF PROJECT



Metro Waste Authority (MWA) operates an approximately 500,000-ton-per-year landfill serving Des Moines and 16 surrounding member communities. Due to the size of the operation and to maintain sound operation procedures, it is essential to maintain knowledge of compaction rates and remaining capacity on a periodic basis. MWA utilizes this data to adjust operations and plan for future design and construction. **BARKER LEMAR** was tasked with the GPS survey and volume calculations for the landfill to monitor compaction and remaining life. Analysis continues on an annual basis.

IMPLEMENTATION



GPS surveys are scheduled and completed by **BARKER LEMAR** for the purpose of volume calculations on an annual basis. At the time of each survey, the MWA waste fill areas and borrow areas utilized since the last volume calculation are surveyed. The topographic data is then incorporated into the current site map for use in the volume calculation reporting package. Volume consumed is calculated based on comparison of the previous topographic data to the current data. Remaining volume is calculated based on the comparison between final top of waste grades and the current topographic data. An effective density is figured based on tonnage disposed over the time period and the total volume consumed over the same timeframe. Borrow usage rates are also tracked to determine projected life of the borrow area. A reporting package is then provided to MWA including previous and current site maps, final grades, remaining cut/fill isopachs for the fill and borrow areas, and the compaction and borrow usage analysis.



SERVICES

GPS surveying; topographic and map feature updates through use of CAD applications; volume calculations; summary reporting.

TIMELINE

Project Start Date: September 1995
Project Completed: Ongoing