

Geosyntec has worked with multiple public and private solid waste clients in developing actionable master plans for achieving short- and long-term goals.

Comprehensive solid waste master planning is an essential tool for public and private entities to employ in their identification of goals for managing solid waste streams. Planning efforts include assessing existing solid waste collections systems within a watershed, systemic determination of current and future needs for collection, handling, recycling, and disposal capacity, and setting forth recommendations for improving management of recycling, residential, commercial, bulk and other waste systems over the short- and long-term.

Solid waste master planning is a process that brings together community input, environmental evaluation, and engineering analyses. A key component of Geosyntec’s approach is sustaining meaningful public engagement throughout the planning process, for which we often work with professional facilitators to develop brainstorming workshops and focus groups. In this way, initial planning phases typically include:

- Data collection and addressing of data gaps
- Assessment of existing system(s)
- Projection of long-term solid waste management needs
- Programs to encourage public input and participation
- Evaluation of regulatory and policy impacts
- Financial and operational impact analyses

These steps culminate in identification of alternatives for improvements in existing systems and facilities. Subsequent efforts turn initial findings into a comprehensive Master Plan for a long-term, sustainable solid waste management system. The Master Plan includes solutions such as potential new technologies, operations or facilities, and a financial analysis and strategy for implementation.

Geosyntec’s solid waste advisory team brings experience working on dozens of solid waste planning efforts across the U.S. and internationally, in which we have assisted our clients in identifying new activities, programs, facilities, and technologies to provide sustainable services that are affordable, robust, and practical in meeting the demands of their residential and commercial customers.

Geosyntec’s master planning efforts for cities and counties typically center on public outreach and education to solicit stakeholder participation and consensus



Representative Clients

Geosyntec team members have provided a wide range of solid waste planning services for a variety of clients, including:

- Anne Arundel County, MD
- Augusta-Richmond County, GA
- Cecil County, MD
- City of Idaho Falls, ID
- City of Kansas City, MO
- City of Killeen, TX
- City of Kirkwood, MO
- City of Lawton, OK
- City of Oklahoma City, OK
- City of San Diego, CA
- City of Springfield, MA
- City of St. Augustine, FL
- City of Waco, TX
- City of West Palm Beach, FL
- Dalton-Whitfield Solid Waste Authority, GA
- Dorchester County, MD
- Frederick County, MD
- Inter-American Development Bank
- Mecklenburg County, NC
- Orange County, FL
- Roanoke Valley Resource Authority, VA
- Solid Waste Authority of Central Ohio
- Southeastern Public Service Authority, VA

Selected Project Experience



Solid Waste Master Planning Study

ORANGE COUNTY, FLORIDA

This comprehensive planning study completed for Orange County, one of Florida's largest counties, provided a roadmap for rationally expanding the County's system to serve its residents for the next 50 years. Services included an assessment of alternative waste disposal technologies including thermal, biological and bio-chemical systems; a build-out study for their existing 1,500-acre landfill to maximize airspace; solid waste generation projections for the next 50 years; a GIS-based assessment of the County for areas that would be suitable for a 2,000-acre future landfill; recommendations to increase multi-family recycling; a transfer station master plan, including an assessment of more than a dozen potential combinations of existing and new stations, identification of parcels, site inspections; and preparation of a financial pro forma to assist the County in evaluating future tipping fees as well as debt servicing.



Solid Waste Management and Recycling Options

FREDERICK COUNTY, MARYLAND

Geosyntec successfully completed this study to investigate potential methods for achieving incremental improvements in countywide waste diversion and recycling rates between 2020 and 2040 in accordance with the updated Maryland Recycling Act and other existing/proposed Maryland legislation. Phase 1 of the study investigated 20 potential methods for achieving incremental improvements in countywide recycling to achieve 80% overall recycling and 90% composting of food scraps and yard waste by 2040. Options investigated included pay-as-you-throw, composting of source separated organics, expanded recycling programs for businesses, beverage container recycling programs, Styrofoam bans, and food donation programs. Significant stakeholder outreach was included to solicit public input on selection of options for inclusion in the study and to provide feedback on the approach and recommendations. Geosyntec's evaluation included cost-benefit analyses, lifecycle cost and environmental footprint assessments, review of operational complexity, and ease of integration into existing County programs. Based on this, Geosyntec helped the County develop a strategic plan for phased implementation of a countywide composting program, starting with small-scale composting of food scraps from restaurants, institutions, and public schools.



Solid Waste Management Plan Update

AUGUSTA-RICHMOND COUNTY, GEORGIA

The Augusta Environmental Services Department (AESD) provides a wide range of services including landfill disposal, curbside collection and recycling, and programs. Geosyntec worked with AESD to update their Solid Waste Management Plan for the period 2018-2027. The updated Plan addressed past and projected changes in demographics, waste generation, and consumer behavior and demands on collection, recycling, and disposal infrastructure. Changes in Georgia State Law and planning guidance for public entities were also reflected. The Plan provides a robust assessment and roadmap for management of solid waste and recovered materials over the 10-year planning period. The Plan describes the solid waste stream size and composition, waste reduction and recycling programs, collection and disposal, and public education efforts necessary to achieve the City's goals and presents programs, strategies, and schedules for implementation.

For more information

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about us

Geosyntec Consultants is a specialized technical advisory and consulting engineering firm that works with private- and public-sector clients to address their complex challenges involving the environment, natural resources, and civil infrastructure. Our vision of success builds on our internal culture of technical excellence and long-held belief that exceptional client service coupled with exceptional project solutions will result in long-term, mutually rewarding business solutions. We bring our clients the dedicated, personal service of a small, local company backed by the experience and resources of a larger firm with global presence.

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