

# CITY OF HIGH POINT

## AGENDA ITEM



<b>TITLE:</b> Solid Waste Feasibility Study	
<b>FROM:</b> Robby Stone – Public Services Director Melinda King – Asst. Public Services Director	<b>MEETING DATE:</b> August 5, 2024
<b>PUBLIC HEARING:</b> N/A	<b>ADVERTISED DATE/BY:</b> April 24, 2024
<b>ATTACHMENTS:</b> SCS Engineering Proposal	

**PURPOSE:** A Request for Proposal (RFP) was advertised for a Solid Waste Feasibility Study to assess the operations and finances of the Landfill, Material Recovery Facility (MRF), Ingleside Compost Facility (ICF), and Environmental Services collections. This study will evaluate short, mid, and long-term feasibility, regarding rates, staffing, equipment and permitting.

**BACKGROUND:** An RFP was advertised for a Solid Waste Feasibility Study on April 24, 2024, and the city received 4 proposals on May 30, 2024. The evaluation team selected two firms for presentations and interviews, which occurred on July 18, 2024.

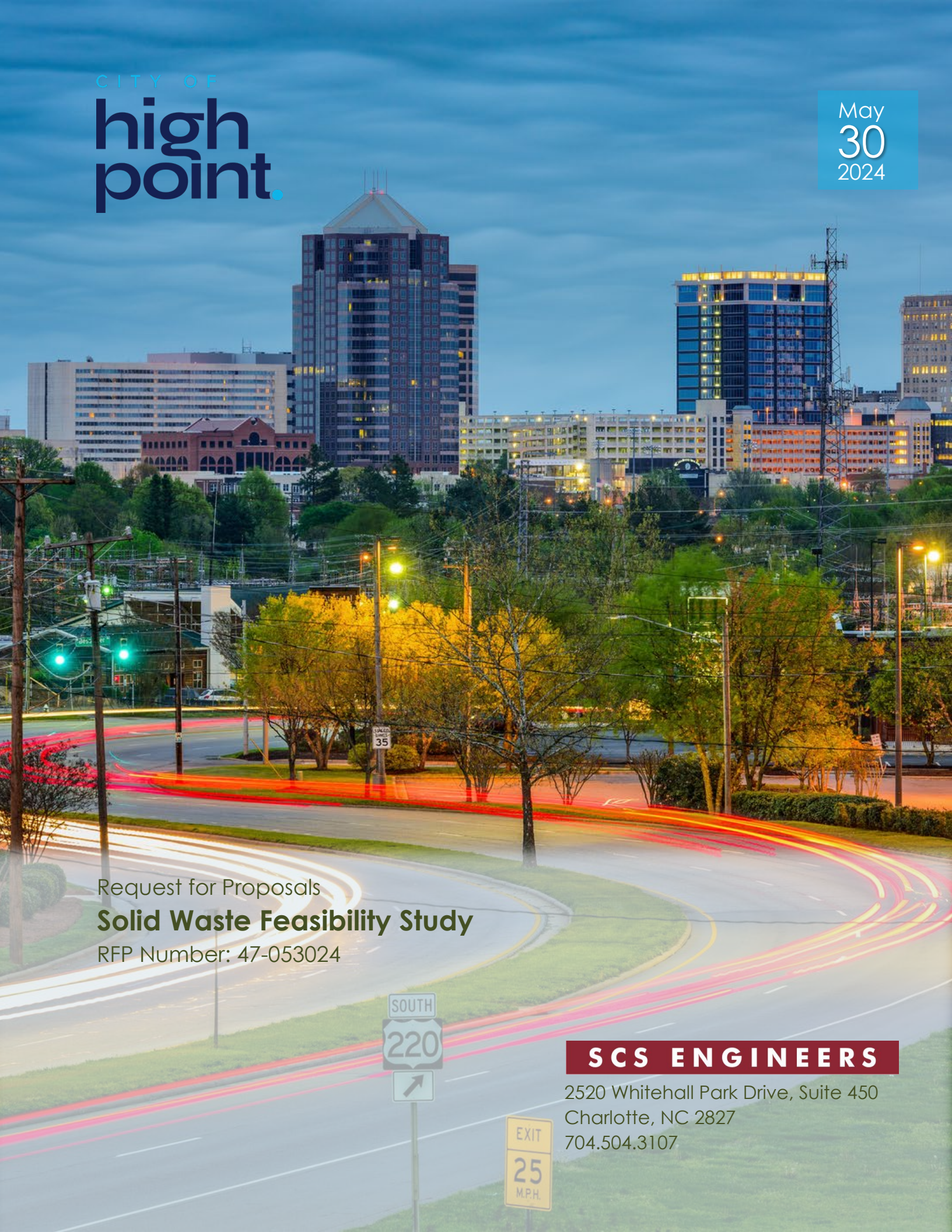
Staff selected SCS Engineering to provide the Solid Waste Feasibility Study. This study is anticipated to take eight months.

**BUDGET IMPACT:** Funding is available in the FY 2024-2025 budget Solid Waste Capital Projects.

**RECOMMENDATION/ACTION REQUESTED:** The Public Services Department recommends approval of the contract and that the appropriate City official and/or employee be authorized to execute all necessary documents to award the contract to SCS Engineering in the amount of \$93,628.00.







Request for Proposals  
**Solid Waste Feasibility Study**  
RFP Number: 47-053024

**SCS ENGINEERS**

2520 Whitehall Park Drive, Suite 450  
Charlotte, NC 2827  
704.504.3107

## Table of Contents

### PAGE #

**1** Section 1 | Letter of Transmittal and Executive Summary

**3** Section 2 | Organization and Staffing

**8** Section 3 | Statement of Work

**17** Section 4 | Qualifications and Experience

**27** Section 5 | Conflict of Interest

**28** Section 6 | Cost and Timeline

Attachment A – Required Forms

Attachment B – Key Staff Resumes





# Section

## Letter of Transmittal and Executive Summary





## 1.0 LETTER OF TRANSMITTAL AND EXECUTIVE SUMMARY

High Point prioritizes the operation of a sustainable solid waste management system. With increasing attention on solid waste impacts on the environment, public health, and equity, the City is in a unique position to enhance its current solid waste system into the future. To be successful in this endeavor, the City needs the support of its residents and stakeholders.

### THE COMPANY

SCS one of the oldest and largest employee-owned solid waste and environmental services firms in the United States. **Founded 54 years ago**, on Earth Day in 1970, SCS specializes in providing comprehensive solid waste services for local government and private industry clients.

Our firm, Stearns, Conrad and Schmidt, Consulting Engineers, Inc. dba SCS Engineers is an S-Corporation. We are financially strong and committed to our financial health, because we know that our success ultimately depends on your confidence in us. Our capital structure and liquidity are sound, our employee ownership (ESOP) model provides for sustainability, and our internal controls and business standards are designed to service our clients.

Our corporate headquarters and the Charlotte office, which will lead the work and be the local contact for this project, are listed below:

**Corporate Office**      3900 Kilroy Airport Way, Suite 100, Long Beach, CA 90806  
Phone: 800-326-9544

**Local Office**            2520 Whitehall Park Drive, Suite 450, Charlotte, NC 28273  
Phone: (704) 504-3107

Our website, [www.scsengineers.com](http://www.scsengineers.com), has a complete listing of offices.

### THE PEOPLE

Our staff of **over 1,200 consultants** includes economists, **solid waste experts**, **rate and financial experts**, engineers, scientists, **operations experts**, and field staff. Our experts are leaders of industry, creating/participating in workshops and conferences, technical papers, research, and national and state-level legislative and rule-making processes.

I (Vita Quinn) am your **Project Manager**. I recently served on the **Board of Directors for the Solid Waste Association of North America (SWANA)**, am SCS' **National Expert on Rate Studies**, and lead our Management Services practice. I will lead all of the work on this project and remain committed as Project Manager throughout the project duration.

Stacey Demers will lead the analysis of programs, user characteristics, operations, and capital needs. She recently completed a three-year term as the **Director of the Sustainable Solid Waste Technical Division for SWANA** and performs detailed research and planning, program analysis, and benchmarking studies for cities across the country.

Stacey and I will receive support from team members in this proposal and, as required, can leverage **hundreds of other consultants available** for various aspects of this work.

## OUR UNIQUE APPROACH AND INTERACTIVE PROCESS

Operating public utilities is an ongoing challenge that extends beyond financial viability, and you recognize the need for an objective evaluation of your rates, policies, and programs. Our **proposed scope of services** includes an analysis of the City's current and projected long-term financial health; a review of ordinances, policies, goals, and objectives related to waste management; a review of existing programs and operations and future services and funding needs; a benchmarking comparison of the City's current and proposed collections rates to comparable nearby entities, public engagement and stakeholder outreach; a review of your fee structures; a written Solid Waste Master Plan including fee recommendations and policy/ordinance revision recommendations; and public presentations of the results of the study.

Throughout the project process, **we seek your feedback**. This provides information that enables us to proceed with our analysis, prioritizing the things that matter most to you.



The process and development of the plan must reflect the values of the City, residents, and stakeholder groups. We can accomplish this by engaging stakeholders during the planning and roll-out of the new Solid Waste Master Plan. You need a sustainable solid waste program that serves residents, businesses owners, and other stakeholder groups for decades to come. We will help you with the roadmap to achieve that vision. The SCS Team is excited to partner with the City navigate the road ahead.

**Our goal is to combine our expertise, financial models, and communication processes in a way that keeps you involved and informed, is efficient and cost-effective, and gets the results you require.**

**Vita Quinn and Stacey Demers are authorized to enter into and negotiate contracts** with the City as required. If you have questions concerning any aspect of this proposal, please contact me at 386-546-7719 or [VQuinn@scsengineers.com](mailto:VQuinn@scsengineers.com).

Sincerely,

Vita Quinn, MBA  
Director of Management Services  
SCS Engineers

Stacey Demers  
Vice President  
SCS Engineers





# Section 2

## Organization and Staffing



## 2.0 ORGANIZATION AND STAFFING

### YOUR PROJECT TEAM

The Project Team comprises two firms uniquely qualified to guide and develop a Solid Waste Master Plan that supports waste reduction and diversion and long-term planning for waste disposal. The Project Team includes SCS Engineers and EESI. Our Team brings the highest level of expertise to the City, resulting in value beyond standard planning services.

33We combine experts from various specialties with the single goal of developing real solutions to advance the City's waste management system. We are excited to share our experience designing plans that include practical, achievable, and measurable sustainable material management (SMM) strategies to reduce waste and effectively manage the disposal needs of the community.

The SCS Team uses a collaborative approach to facilitate a shared vision amongst crucial stakeholders to help communities like High Point.



### SCS ENGINEERS

SCS has completed more than 500 SMM projects, including:

- Projecting waste generation, recycling, and disposal quantities
- Identifying technically and financially viable diversion strategies
- Evaluating the capacity of facilities and regulations to manage waste solid waste systems
- Establishing incentives for municipalities to develop programs and facilities to reduce reliance on landfills
- Facilitating stakeholder meetings
- Preparing reports and presentations for the local community and state regulators

*SCS completed more than 500 SMM plans, studies, surveys, assessments, audits and research projects.*



**Sustainable Materials Management Services**

<b>Plans and Studies</b>	Comprehensive SMM/Solid Waste/Zero Waste Plans Strategic Plans Sustainability Plans Regulation Review and Recommendations Policy Development and Implementation	Program Planning Benchmarking of Services and Fees Diversion Analysis and Planning Waste Generation and Characterization Studies Feasibility Studies Greenhouse Gas Inventories
<b>Financial and Economic Analysis</b>	Rate Analysis Hauler Audits Cost of Service Studies Franchise Agreement Reviews Cost, Financial, and Economic Analysis Alternative Rate Structures and Fee Schedules	Evaluation of Public-Private Partnerships Development of RFQ/RFP/Bid Documents Procurement Assistance Grant funding applications and management Customer Billing and Service Reviews
<b>Program Design and Implementation</b>	Collection Assessments and Program Development Waste Assessments Business Technical Assistance Diversion Program Development Facility Feasibility Studies Implementation Schedules	Monitoring and Evaluation Diversion Assessments Program Effectiveness and Improvements Special Events and Public Venue Programs Construction & Demolition Debris Diversion Programs LEED Certification
<b>Public Outreach and Education</b>	Development of Public Education Programs Facilitation of Public Meetings Workshops and Seminars Public Opinion Surveys	Flyers, Posters, Newsletters, Social Media School Assemblies Contests, Promotions, Public Events



**Economic Environmental**  
— SOLUTIONS —  
*EMPOWERING PEOPLE; PROTECTING THE PLANET*

EESI is certified by the Women's Business Development Council as a female-owned firm. EESI offers various services to help communities achieve solid waste management and landfill diversion goals. These services include holistic strategic waste planning, regulatory review, SMM solutions, procurement, greenhouse gas modeling, and financial analysis.

Because EESI works throughout the United States and worldwide, our clients receive insight into emerging trends and best waste management and recovery practices. EESI works closely with our clients to harmonize these trends and techniques with the local community's goals and conditions. EESI then designs implementation plans and outreach materials that foster support for our recommendations amongst residents, businesses, solid waste staff, and government officials. EESI is located in Cincinnati, Ohio and you can contact Karen Luken at 513-476-4258.

## OUR TEAM OF EXPERTS

Our team members, highlighted on the following pages, combine technical expertise and knowledge of the political environment with **the ability to meet your greatest challenges**.



## KEY STAFF

The key staff for your project have worked together for clients seeking solid waste management proficiency and zero waste expertise. The key staff here are supported by dozens of planners, scientists, analysts and experts in GIS systems, anaerobic digestion technology, and composting. Resumes for key staff are provided in Attachment B.



### Vita Quinn | Project Manager & Financial Specialist

Vita has 18 years of experience as a management consultant and financial analyst with public sector entities. She develops economic sustainability solutions for various general governments, enterprise funds, and quasi-governmental entities. Her expertise includes financial and fiscal impact analysis, rate and fee development, cost-benefit analysis, capital planning, impact fee development, and funding analysis for solid waste and recycling.

Vita developed a methodology for Atlanta, Georgia, to charge for solid waste and recycling collection and various special services such as street sweeping and dead animal collection. She worked with their



attorneys to update the Charter and ordinances and present the study results in public meetings. She supported updating Atlanta's rates, billing system, and operational processes to improve efficiency, accuracy, and ease of billing.



### Stacey Tyler Demers, LEED® AP | Waste & Diversion Programs

---

Stacey has 30 years of experience in the environmental field, focusing on waste diversion programs and sustainability. She provides clients with technical and analytical skills to develop, evaluate and improve programs that reduce waste, increase recycling, and divert organics. As SCS's national expert in waste characterization, she has a substantial working knowledge of the types and quantities of materials in various waste streams and can customize zero waste strategies by material and generator type.

Stacey recently served as Project Director for two solid waste master plans in the past two years in Virginia: Prince William County and Arlington County. Like High Point, Arlington County wanted to create a roadmap for zero waste programs and policies. She also served as the Project Director for Prince George's County, Maryland, to assess and evaluate the County's waste diversion programs and practices and identify options for reducing waste and increasing waste diversion through reuse, recycling, and composting programs. This project included engaging with multiple stakeholders to identify gaps and recommend opportunities for progress toward zero waste goals.



### Karen Luken, CEO | EESI | Education & Outreach

---

Karen uses her 30 years of experience with solid waste planning, waste collection and operations, regulations, financing, and public outreach to help cities, counties, states, and countries solve complex waste management challenges. Her facilitation training enables her to transform solid waste management recommendations into action items that government officials, staff, and the community endorse.

Karen has developed solid waste management strategies and optimized solid waste systems in 23 countries and four continents. She has directly observed the inequities of solid waste facility siting, services, and decision-making, especially in marginalized communities. Thus, proactively engaging all society members is a guiding principle in her solid waste management engagements.

She is the national solid waste chair for the American Public Works Association and recently worked with SCS to prepare a solid waste master plan for Yakima County, Washington. This plan included strategies to reduce and recover food waste and increase recycling at the county and municipal levels.



### Michelle Leonard | Project Advisor

---

Michelle has 35 years of experience in environmental consulting and project management, emphasizing solid waste management planning and facilities. She assists public and private sector clients in preparing zero waste plans; designing and implementing waste reduction, recycling, and reuse programs; and evaluating existing programs to identify opportunities to reduce, reuse, and recycle solid waste.

She prepares feasibility assessments and permits for transfer stations, material recovery facilities (MRFs), and drop-off and buy-back centers. She has a strong working knowledge of solid waste management regulations and practices and has presented numerous successful projects to city, county, and state regulators.



### Greg McCarron, PE | Organics Specialist

---

Greg has 35 years of progressively responsible experience in solid waste management, including composting, solid waste planning, recycling, transfer stations, waste composition studies, waste-to-energy systems, and landfill systems. His experience includes operations, project management, design, permitting, regulatory support, construction oversight, system start-up, economic analysis, and technology assessment.

Greg served as the project manager of an organics recovery feasibility study that considered the diversion of organics from residential, commercial, and institutional generators and included a technology review for the capture/collection and processing of organics. Tasks included siting, marketing, education, public outreach, and staff training.



### Brent Dieleman, TRUE Advisor | Zero Waste Specialist

---

Brent has nearly 20 years of solid waste and recycling planning experience. He has worked with municipal clients throughout the United States to find solutions to overcome barriers and improve solid waste management programs. Brent has extensive experience working with communities on solid waste management plans, many of which strive to achieve zero waste. He is currently the Project Manager working with Arlington County, Virginia to develop and finalize their 20-year solid waste management plan, which is similar in scope and vision to the plan High Point requires. **Brent is a certified zero waste advisor through the Green Business Certification, Inc.**

In addition to solid waste planning, Brent has specialized expertise in collection program evaluation and improvement, solid waste and recycling characterization/audit services, drafting and updating solid waste/recycling policies and regulations, stakeholder engagement and consensus building, recycling technical assistance, resource development, data analysis, grant research and application submittal, and database management.



## Statement of Work





## 3.0 STATEMENT OF WORK

We commend the City's inclusive scope of work for developing the Solid Waste Master Plan. Our approach includes blending the experience of national and international solid waste experts with the ability to tailor innovative diversion strategies to technical and financially viable local implementation plans.

The best Solid Waste Master Plan cannot be effective without a targeted, progressive communications and marketing plan. Professionals with the SCS Team work **with organizations contributing to genuine environmental improvement**. Helping municipalities plan for change in their solid waste system is our business. Below we explain our approach to meeting the City's Scope of Work.

### PHASE 1: TASK 1 - PROJECT INITIATION

#### Goal

The goals of this task are to 1) further develop our relationship with the City team and other department personnel in the context of this project, 2) confirm the City's expectations of our performance, 3) outline the schedule and roles/responsibilities for each member of the Team, and 4) facilitate a Team kickoff meeting. The relationships developed and information acquired during this initial task will create a strong foundation for the system analysis and ultimately the City's next Plan.

#### Process

Upon award notice, we will arrange for one or two meetings with the City's project manager and other department personnel involved with this project. These meetings will confirm the City's timeline for completion of the Plan, availability of data and additional information relevant to the solid waste system, and approach for the planning process.

We will inquire about the schedule for Council meetings and lead times for presentation materials so we can identify key milestones/deadlines to align with their schedule and the Plan submission target date.

Building support for changes in the solid waste system requires incorporating viewpoints from various entities. Roles and responsibilities of the City-appointed Team and SCS Team will be summarized to facilitate cooperation and synergy as we work together. We will also use these meetings to identify the external individuals and organizations to include as key stakeholders and the best approach to engage them.

The SCS Team will create an agenda for the kickoff meeting and prepare and distribute a meeting summary to Team members.

## PHASE 1: TASK 2 - SOLID WASTE SYSTEM ASSESSMENT

### Goal

The goal of this task is to develop a detailed inventory of the City's solid waste management system that includes the following: 1) assess and analyze current City waste streams, 2) project future waste quantities and waste composition by sector, and 3) evaluate gaps in current solid waste services. The SCS Team will use the waste system mapping as a basis for engaging stakeholders and for future evaluation of alternatives and diversion strategies.

### Process

The City manages a waste management system that provides collection of trash, yard waste, recycling, and bulky waste. Additionally, the City provides backdoor service to certain eligible households, delivers and maintains carts, collects waste from public trash containers, hosts outreach and education opportunities and litter reduction events, and manages roll off container rentals (red boxes). As a true sanitation fund, the City also performs certain common good services such as illegal dumping cleanups and code enforcement. The City also owns and operates a landfill and MRF that handle most of the City's waste. Yard waste is delivered to a composting facility.

As a first step in this strategic planning process, we will review documents provided by the City, including the most recent Solid Waste Master Plan (if available); existing contracts for solid waste services; previous solid waste studies, plans, and reports; and North Carolina laws, regulations and policies as well as annual reporting to the Department of Environmental Protection (DEQ) for the past three years.

### Develop Localized Waste Stream Projections

Understanding the existing system is a critical first step in developing the Plan. SCS anticipates the following work efforts under this task:

- **Demographics** – Research, document, and summarize existing demographic information affecting the solid waste management system (e.g., population projection trends, housing density, residential & commercial growth trends, and urban concentrations).
- **Solid Waste Collection Areas and Facilities** – Obtain solid waste system maps (i.e., facilities and collection areas) and supplement this map by locating other governmental and privately owned/operated solid waste management facilities within the region. We will also attempt to obtain historical data by facility relevant to existing City waste and recyclable material flows to understand existing capacity limits, constraints, and opportunities for future growth in material management.
- **Waste Quantities and Flow** – Identify geographic sources of waste material generation, how they are collected, and where they are disposed or recovered. This will include residential, commercial, institutional, and recreational waste streams.

- **Management Structure and Resources** – Document current solid waste management organization, job descriptions, personnel, and interactions with other departments. The SCS Team will also inventory solid waste resources such as vehicles, waste collection containers, and other equipment used by the City for waste management activities.

### Assess Solid Waste System Vulnerabilities

We understand that the current solid management system is funded through a combination of user fees and disposal charges at the landfill and MRF. However, changes in the solid waste system could impact City residents and businesses, both financially and operationally.

We will work collaboratively with the City to identify likely changes to the solid waste system over the next 20 years and quantify the impacts on residents and businesses in the City. These changes may involve outside market adjustments similar to the 2018 Chinese National Sword policies that limited markets for recyclable commodities, a full or partial closing of the City's Kersey Valley Landfill in the future, or the compost facility closing. Changes could also be from waste diversion policies that limit disposal of large quantities of food scraps, require recycling infrastructure in commercial establishments and multi-family properties, or implementation of a statewide bottle bill.

### Audit and Gap Analysis of City Policies, Plans, and Programs

To confirm there is adequate solid waste infrastructure available to manage the City's solid waste for the next 20 years, it is imperative to forecast the amount and types of waste that will be annually generated, recovered, and disposed of. We will work with the High Point planning and development staff to ascertain population and employment changes throughout the 20-year planning period.

We will review any other City documents to assess potential gaps in solid waste services. Where gaps exist, we will further evaluate strategies that the City can implement to close the gap.

### Presentation Materials

We will work with the City to identify the findings from the previous subtasks that warrant presentation to vested stakeholder groups and agency partners, the Council, and the greater community. We will tailor our presentation deliverables to reflect presentation time limits (if any) and the audience – some groups may be more interested in certain study aspects.

## PHASE 1: TASK 3 - FUNDING/REVENUE MECHANISMS AND COSTS

### Goal

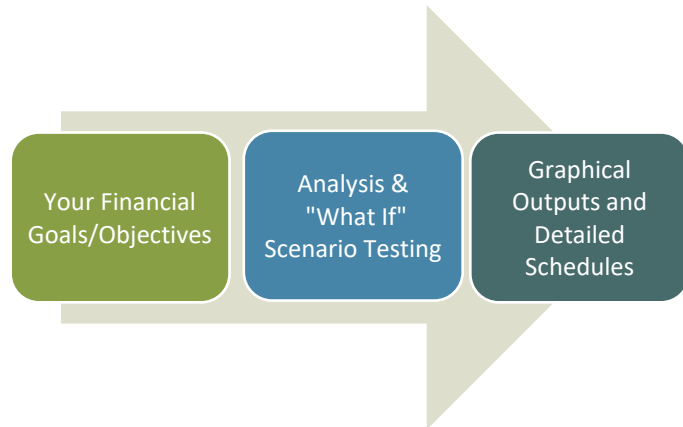
While it is important to know and plan for growth in your system and changes to your programs, you also need to know the costs associated with these existing and future programs and the methods to fund those costs. Funding/revenue mechanisms are important to a successful plan.



## Process

SCS uses an interactive modeling approach that allows input from you as we develop **customized financial solutions**. We will perform a revenue sufficiency analysis to determine the long-term sustainability of your solid waste system revenues, including a 10-year **financial management plan and associated plan of rate adjustments**.

During meetings with your staff, we display the models and work with you to **test multiple “what if” scenarios** that consider your financial sensitivity to changes in various variables. For example, we can test the impact of changes to your vehicle program costs and timing, and the associated impact on operating expenses and staffing requirements.



For each scenario considered, we will identify the necessary revenue adjustments, including any borrowing that may be required, and the associated financial, fund balance, and customer impacts.

We will also evaluate capital funding alternatives, including cash funding, debt funding, grants, or any other financing alternatives the City is considering. The results are displayed in a simple, graphical format that allows for easy **comparison of scenarios**. Some of the steps in this process are detailed in the following sections.

### Revenue Projection

We will examine a **multi-year history** of solid waste revenues, tonnage, monthly billing history, budgeted revenue to actual receipts, **financial trends**, and financial policies that affect the revenues of the utility. We will also consider **revenue optimization and revenue diversification strategies**.

To project revenue from customer charges, we evaluate historical billing data and revenues to estimate the anticipated growth in accounts and changes in usage/disposal that will affect the City’s rate revenues. We will also review the population growth and new housing unit projections market study above and determine how this will affect the number of **accounts, containers, and volume projections**.

### Expense Projection

To project your revenue requirements, we review your historical budgeted and executed operating expenses, all planned capital improvements and associated funding sources, existing debt service and coverage ratios, available and recommended operating, capital, and debt service reserves, and any financial policies and reserve requirements dictated by policies of the City. We will also **consider your goals to address during the study**, such as cash reserve targets, operational changes, or hiring needs.

We will study near-term **changes in capital and labor costs** and how this will affect your expenses. Using cost escalators, we estimate your future expense increases and the nature of

any expenses that may be tied to a contract or are one-time/temporary. As we tailor our financial model to your utility, we identify any other **issues or questions affecting financial performance to discuss with you** during our first interactive meeting. Our model will utilize the above-mentioned data and assumptions to **create projections** of revenues, operating expenses, capital spending, and fund balances.

#### Capital Program Review

One of the largest expenditures driving the need for rate increases is the cost of capital outlay required to meet **current and future service needs and regulatory requirements**. In addition, there are significant renewal and replacement cost requirements to **preserve the reliability and useful life of your equipment** and other assets. The City must consistently fund vehicle replacements or incur increases in **repair and maintenance** costs. And implementing new programs often requires additional carts, routes/vehicles, or other capital expense.

We will perform a detailed review of your current capital program, including vehicle/equipment replacements and the **anticipated sources of funds** available to pay for these projects. This discussion of funding is important to reducing the impact of capital on rates. Recognizing this, we will:

- Review the level of your budgeted capital spending vs needed capital investment,
- Consider the priority of individual items within your capital plan,
- Review all restricted and unrestricted funds available for projects,
- Discuss timing of project expenditures, and
- Consider external funding sources, such as grants or loans, that may mitigate rate impacts.

In meetings with City staff, we will review the level of capital or types of projects the City historically cash funds from rate revenues. We will evaluate the pros and cons of alternative capital funding practices, and financial considerations associated with leveraging debt financing.

We will consider whether the City could optimize its use of cash and debt funding to maximize available cash reserves, improve the long-term stability of utility rates, and limit risk. Working with City staff, we will develop a **recommended capital spending and funding plan** for the identified capital and future capital needs.

#### Financial Management Plan

Based on our analysis and interactions with staff, we now have a **forecast of your system growth** and **anticipated revenues under your current rates**. We also have a **projection of operations and maintenance** expenses, **capital investment related to the master plan**, debt service payments, and the resulting fund balances in each year of the projection period. The final step is to review the scenarios the City may wish to consider for project timing and funding, policy changes, or sensitivity to changes in any of the assumptions used in the analysis and then **develop a long-term plan of rate adjustments** for each scenario. Working with you, we identify the scenario that best reflects your **anticipated and desired outcomes while minimizing rate impacts** to your customers. This plan will provide the revenue requirements used as the basis for updating the structure of your rates.

## PHASE 2: TASK 4 - DIVERSION STRATEGY AND IMPLEMENTATION ROADMAP

### Goal

This task aims to use the research, data, and analysis completed as part of the Phase 1: Task 2 Solid Waste System Assessment to develop diversion strategies and an implementation roadmap. We will organize strategies by waste-generating sector, strategy type, and scale to facilitate waste reduction on a Citywide level. The SCS Team will coordinate with the City's Team to develop strategies and the associated implementation roadmap, creating a valuable and actionable tool that changes how the City, citizens, and businesses think about waste.

### Process

We will use the research, data, and analysis information gathered from the Phase 1, Task 2 as the framework for identifying diversion initiatives to be considered by the City. SCS will use a systematic approach to design each strategy, and each will address the target waste generator and waste types, as well as the public outreach, technical, infrastructure, financial, and regulatory requirements to implement each strategy. Potential strategies might include expanding the City's waste reduction program, evaluating the viability of composting food waste, considering a mandatory recycling policy, and converting certain waste streams into energy.

The City may want to consider many policies, programs, and infrastructure improvements as part of the SWMP. The important aspect of this work is to define the activities the City will adopt to achieve its goals and integrate with existing systems that are currently working well. The framework will provide the basis for identifying, evaluating, and formulating the specific actions the City will want to undertake during the planning period.

### Identify Draft Diversion Strategies

The SCS Team will draw on our national and international experience and expertise with waste reduction, notably our recent work developing waste diversion strategies for Buncombe County, NC and the Arlington County Zero Waste Plan, and create a prioritized list of potential strategies for consideration by the City. In identifying these strategies, we will prioritize alignment with existing City policies and plans. We will organize this initial strategy list by planning sector, type (i.e., program or policy), and potential to scale on a neighborhood and Citywide level. It may be necessary to align the draft strategies to target specific industries, business types, and regions/areas in the City as appropriate. Additionally, policy-based strategies will include barriers to implementation (if any) and how to mitigate these obstacles.

Diversion strategies will cover programs and policies aimed at:

- 1) Residents and businesses and
- 2) City facilities.

It is important for the City “walk the walk” when promoting waste reduction and diversion goals to the public. Waste reduction strategies employed at City facilities will be visible to the public and reflect well on City operations.



## Planning Meeting

SCS prioritizes dialogue and discussion with the City as it is critical to developing a plan that serves the City well for the foreseeable future. For this subtask, SCS will facilitate an initial City meeting to present each draft strategy and obtain feedback. Specifically, we will design this meeting to foster discussion on the following:

- Scope and implementation requirements of each strategy
- Strategies that should be removed, added, or refined for continued analysis
- Identification of criteria for prioritizing each strategy

We anticipate providing the memorandum to the City before the meeting to facilitate a productive call.

## Assess and Prioritize Diversion Strategies

We will use our expertise and the planning meeting feedback to further analyze and prioritize each diversion strategy. Criteria will be discussed and selected during the planning meeting. Example evaluation criteria might include:

- Waste diversion impact
- Greenhouse gas impacts
- Estimated costs
- Required resources
- Implementation obstacles
- Timeline
- Equity considerations

Selected criteria will be weighted to compare each strategy and prioritize each opportunity for achieving diversion.

## Develop Draft Implementation Roadmap

Building upon the diversion strategy analysis, we will prepare an implementation roadmap. The roadmap will include a timeline to implement each strategy over the specified planning period. We typically recommend early implementation for strategies that have a significant impact on waste reduction and diversion. We anticipate long-term strategies will require time to develop and mature to achieve the high-level diversion needed to reach diversion. In addition to the timeline, the roadmap will include additional information on stakeholders impacted, required partners, and suggested resources for each strategy to be successful. Strategies requiring action by the City will consist of further analysis of the necessary organizational resources.

SCS believes it is vital for the roadmap to provide quantitative estimates of the diversion potential of each strategy. We will use these estimates to confirm the totality of the methods recommended for the City to optimize using waste as a resource. SCS will complete this exercise by estimating the quantity of disposed solid waste each strategy could recover when operating at full capacity. Critical to this exercise is having the City's current waste diversion rate so that the diversion impacts of each strategy may cumulate to increase the recovery rate.

## Finalize Implementation Roadmap

The SCS Team will incorporate the feedback from the planning meeting into the diversion implementation roadmap developed. We will seek additional clarification and direction as needed to finalize the roadmap for incorporation into the City's new 20-year SWMP.

## PHASE 2: TASK 5 - DEVELOPMENT AND SUBMISSION OF SOLID WASTE MASTER PLAN

### Goal

The goal of this Task is to 1) develop a draft and final Solid Waste Master Plan (Plan), 2) recommend updates and changes to High Point code to align with diversion strategies, 3) support presenting the Plan to the public, and 4) submit finalized Plan to the City.

### Process

We will use the deliverables of the prior tasks to prepare a 20-Year Solid Waste Master Plan. While long-term planning is appropriate for implementing diversion strategies, the SCS Team will supplement the long-term plan with short- and medium-term milestones, benchmarking, key performance indicators, and plan reviews.

### Subtask 4.1 – Develop Draft Solid Waste Master Plan

**Based on research conducted by 3M®, people process visuals 60,000 times faster than text, and 65% of people are visual learners, according to the Social Science Network.** It is hard to get people to read reports that are not visually engaging; we are now having to compete for their attention!

Therefore, we recommend the development of a concise and aesthetically pleasing summary of the planning efforts for the "public-facing" Solid Waste Master Plan. We will work with the City to determine the appropriate level of detail (anticipated to be very high-level summaries) to include in the public-facing Plan. The SCS Team will use Adobe InDesign and Illustrator, or similar program(s), to develop the easy-to-read plan summary.

We have found that having such a document available allows the general public and elected officials to better understand the current system and its future goals without needing an in-depth technical review. We also recommend making final technical memoranda developed in the previous tasks on the City's website and the public-facing Plan for those readers who prefer to explore more details on specific topics.

### Develop Draft Code Recommendation Document

Findings from earlier tasks will identify potential solid waste service gaps and diversion strategies that require regulatory and legislative changes. The SCS Team will summarize these challenges in a code recommendation document that lists existing codes that need to be modified and new codes that would allow the City full or more complete implementation of recommended policies and programs along with a critical pathways to removing barriers for full implementation. The code recommendation document will be separate from the Plan to be used

to promote and encourage codes that allow City staff to implement diversion strategies and the critical implementation pathways.

### **Support Solid Waste Master Plan Presentation to the Public**

As noted in above, the presentation materials will introduce the Plan recommendations concisely and aesthetically pleasingly, utilizing graphics and photos where possible. We will work with the City to design a community survey through paper copies at public meetings, electronically through the City's website, or through other means to receive feedback on the Solid Waste Master Plan.

### **Finalize the Solid Waste Master Plan and Code Recommendation Documents**

SCS will collaborate with the City throughout the public feedback process to make decisions on what feedback should be incorporated into the final Plan. Feedback and suggestions from each public meeting and from the Council will be documented in meeting minutes and notes.

The SCS Team will review the suggestions and edits with the City to make a decision on how the Plan should be modified. The modified Plan will be resubmitted to the City one final time for review and editing. We will then finalize the Plan and prepare appropriate supporting documents. We also anticipate incorporating the City's feedback into the Code Recommendation Document.

The expected project deliverables outlined in the City's RFP will be incorporated into the final Solid Waste Master Plan. Recommendations for City ordinance revisions will be included but the detail will be a separate deliverable.

## **PROJECT MANAGEMENT**

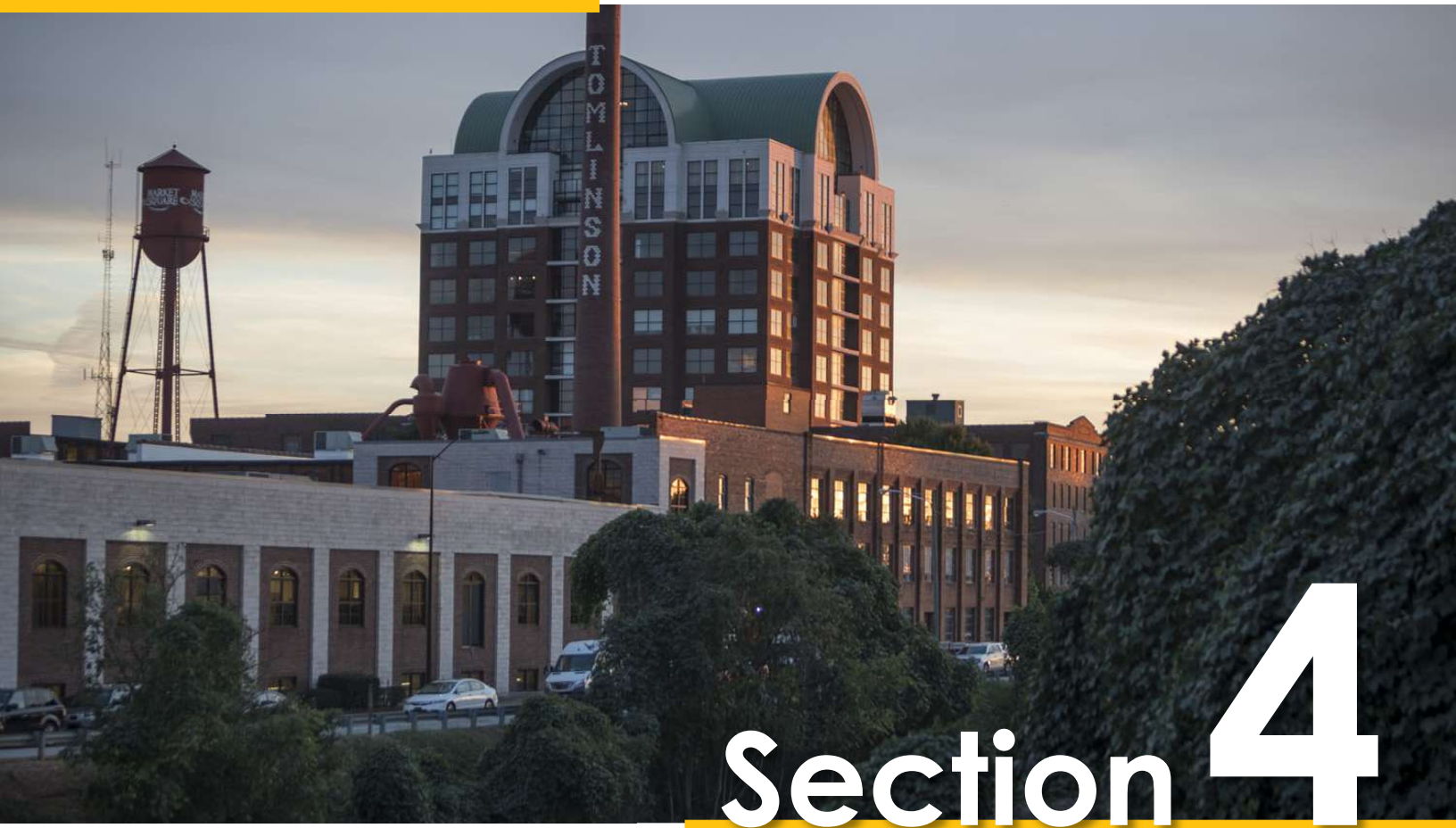
At project initiation, the SCS Team will establish a project management system that tracks the progress on each task, the budget for each task, and cumulative budgetary adherence. SCS maintains a robust project management system that includes the following elements:

- Project coordination and communication
- Quality assurance/quality control (QA/QC)
- Project control/progress status monitoring

As Project Manager, Vita Quinn's primary responsibilities will include:

- Serving as the primary point of contact for the City
- Coordinating and directing SCS Project Team activities
- Establishing and maintaining clear lines of communication
- Monitoring and controlling the project schedule and budget
- Anticipating potential issues and bringing them to timely resolution
- Initiating and maintaining QA/QC throughout the project
- Adhering to contractual and technical requirements





# Section 4

## Qualifications and Experience



## 4.0 QUALIFICATIONS AND EXPERIENCE

### SOLID WASTE PLANNING AND DIVERSION PROJECT PROFILES

The six solid waste professionals from SCS and EESI highlighted above who will collaborate with High Point to achieve your solid waste goals either directly managed or worked on the projects we show below.

#### Strategies to Increase Waste Diversion in 2022 | Buncombe County, NC

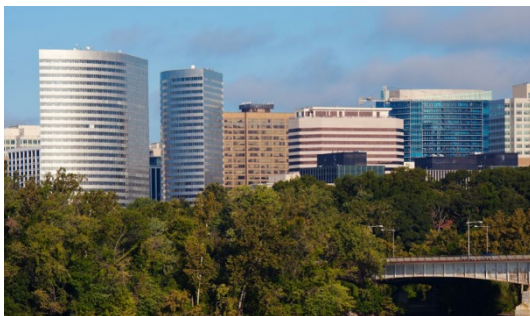


SCS assisted the County in identifying ways to make existing waste diversion programs more effective and identify new programs and policies that could divert additional material from landfill disposal. Working collaboratively with County staff, SCS identified six key initiatives with the greatest potential:

1. Organics Management
2. Helping Multi-Family Properties and Commercial Establishments Recycle Properly
3. Targeting Construction/Demolition Debris for Increased Diversion Opportunities
4. Expanding Services at Convenience Centers, and
5. Implementing Data Collection Methods.

Before the waste diversion study, SCS conducted a waste characterization study to identify the types and quantities of materials landfilled by residential and commercial sectors in unincorporated areas of the County and the City of Asheville.

#### 2023 Virginia Solid Waste Management Plan and Voluntary Zero Waste Strategy | Arlington County, VA | SCS



The Commonwealth of Virginia requires the submission of Solid Waste Management Plan (SWMP) to meet the state mandatory recycling rate of 25 percent. In 2022, Arlington County contracted SCS for assistance updating their 20-Year SWMP and developing a voluntary Zero Waste Strategic Plan even though their current recycling rate of 51.4 percent exceeded the state's mandated rate.

SCS identified zero waste initiatives and presented them to the Solid Waste Committee (SWC). Through further discussions, the County selected zero waste strategies they wished to pursue. SCS estimated potential impact by sector, potential greenhouse gas savings, and cost for each initiative to help the SWC prioritize near, mid, and long-term strategies. SCS is currently incorporating SWC feedback and preparing the SWMP for public presentation.

### Progressing Zero Waste | Hamilton County, OH | SCS and EESI

---

In 2018, SCS conducted a waste characterization study for Hamilton County, Ohio R3Source that showed that food waste, corrugated cardboard, and plastic film were the largest components of the waste stream. SCS and EESI collaborated with R3Source in 2022 to develop targeted strategies as part of a master plan to recover these waste streams, including:

- Campaigns to change food image expectations
- Reduce label confusion (expired vs. best by)
- Target businesses by food, cardboard, and plastic film generation
- Educate businesses on the cost of volunteer food bank recovery
- Support community compost programs



These recent initiatives supplement the Residential Recycling Initiative (RRI) that SCS designed for R3Source during its first SMM plan. The fundamental purpose of the RRI program was to provide individual neighborhoods with the autonomy to create their own unique pathways to reduce reliance on landfills. Hamilton County R3Source divides RRI funds among Hamilton County communities as an incentive to increase recycling and organics diversion and decrease waste. As a neighborhood increases its diversion rate and collects tons of materials, the community receives more RRI funds. This innovative approach now serves as a model for numerous communities.

### Zero Waste Policy Analysis | City of Virginia Beach, VA | SCS

---

The City of Virginia Beach partnered with SCS to complete a zero waste policy analysis and position paper. The purpose of the analysis was to provide the city with a clear understanding of zero waste policies and programs, and the potential implications to the city should the decision be made to implement such a program.



The following tasks were part of this study:

- Review and summarize the City's existing solid waste policies, programs, facilities, and rate structure;
- Identify municipalities that are implementing zero waste policies;
- Identify major components of the city's waste stream, and identify potential programs that could be implemented to reduce waste disposal and increase diversion;
- Estimate the potential diversion of specific waste streams that could be achieved by implementing the programs, and the implementation steps for those policies and programs; and
- Prepare a Zero Waste Policy Report for the City.



### 2021 Virginia Solid Waste Management Plan | Prince William County, VA | SCS



In 2020, Prince William County contracted with SCS to develop their 20-Year updated Solid Waste Management Plan (SWMP). The County had made a recent commitment to expand organics processing capacity in the region through a public-private partnership for a composting system to process yard trimmings and increasing quantities of food scraps.

SCS worked with the County to document existing waste and project future waste quantities by sector, assess policies and programs for continued waste diversion and disposal, and secured financial

security with an assessment of solid waste rates and revenue.

SCS presented sections of the SWMP through multiple meetings with the Solid Waste Advisory Committee. The Plan was presented for public comment and submitted to Virginia DEQ.

### Assessing New Recycling Strategies | Frederick County, VA | SCS

The County's long-time recyclable material processor announced in the summer of 2019 that it would close by year-end due to the difficulty of marketing materials due to China's National Sword Policies. As a result, the County's cost to haul recyclables increased to over \$200/ton, coupled with higher tipping fees and diminishing rebates. SCS evaluated the County's options for utilizing various out-of-county processing facilities, partnering with neighboring communities, developing a baling facility to condense materials, reducing transportation costs, and collaborating with private-sector haulers.

SCS helped the County show its stakeholders that its recycling program was operating efficiently considering potential alternatives. Because the County's 11 drop-off facilities are staffed, reducing contamination and collecting material commodities separately, the County negotiated a reduced processing fee with a cooperative MRF. By segregating recyclable materials by commodity at their convenience centers and strictly monitoring contamination, the County's materials avoid the costly single-stream mechanized process and can be baled and sent directly to markets.

SCS also helped the County show that converting its plastic and cardboard collection containers from 30-yard roll-offs to eight-yard dumpsters reduced transportation costs. The conversion allows a milk run collection from the convenience centers using a front-load waste collection vehicle with compaction resulting in over \$200,000 in savings annually.

### Transitioning to a Sustainable Materials State | Iowa Department of Natural Resources | SCS and EESI

The Iowa Department of Natural Resources (DNR) contracted with SCS and EESI (SCS Team) to establish a clear path to continually develop and build an SMM system over the next 20 years. The SCS Team helped DNR achieve this goal through research and a series of facilitated stakeholder and subcommittee meetings that:

- Establish SMM priorities
- Evaluate the applicability to Iowa of SMM implementation processes in other states
- Conduct life cycle analysis (LCA) on materials to gauge public health and environmental impacts of materials management from extraction, manufacture, distribution, consumption, reuse, and end-of-life management
- Recommend strategies to implement SMM policies, programs/facilities, funding measures, and progress metrics in Iowa and responsible management of the remaining waste stream



### Optimizing Solid Waste Management System | Town of Chapel Hill, NC | SCS

SCS assessed the Town of Chapel Hill's existing solid waste collection and disposal programs. This assessment identified opportunities to enhance these services, improve efficiencies, and evaluate the applicability of innovative technological developments in the solid waste industry, including recycling, reuse, and waste conversion. Options identified considered the town's organizational values and commitment to sustainability through social equity, economic vitality, and environmental stewardship.

After thoroughly assessing the town's existing solid waste management system, SCS conducted a pro forma analysis to evaluate various options' status quo. The pro forma model allowed the comparison of financial implications of complex program decisions over 30 years and resulted in recommendations for:

- Changes in the residential collection schedule for improved efficiency
- Automation of the town's collection fleet to reduce collection costs
- Implementing a Pay-as-You-Throw program to reduce waste quantities
- Construction of a Town-operated or regional waste transfer station to maximize flexibility promote self-reliance, and maintain flexibility for managing various waste streams
- Continued use of county-managed recycling and yard waste programs

### **Conducting Needs Assessment and Increasing Landfill Diversion |** Yakima County, WA | SCS and EESI

---

SCS and EESI worked with Yakima County, Washington, to assess the solid waste needs of the County and individual cities and towns. SCS will then develop a plan to address the identified needs. Specific tasks included:



- Projecting population and associated waste stream generation rates
- Surveying municipalities for service levels and rates for municipal solid waste collection
- Developing a program to reduce contamination in drop-off recycling
- Identifying strategies to increase landfill diversion
- Improving the performance of the County's household hazardous waste facility
- Facilitating solid waste advisory committee (SWAC) meetings
- Preparing a plan that complies with regulations

### **Promulgating and Amending Recycling Ordinances |** Pennsylvania Department of Environmental Protection (DEP) | SCS

---

SCS works with communities throughout Pennsylvania to promulgate new or amend existing recycling ordinances and policies with precise requirements for various stakeholder groups, such as residents and haulers. These ordinances also include enforcement provisions that emphasize collaboration for compliance but include other penalties (i.e., fines) when needed to achieve compliance.

SCS structures recycling ordinance and enforcement action around requirements for each stakeholder group, including individual hauler needs. For example, haulers who violate a provision may lose their ability to collect materials in a community legally. In addition, communities often assess fines to residents and business owners for violations. Therefore, we emphasize a collaborative approach to compliance for each community where SCS develops a recycling ordinance or policy. This approach is one where neighborhoods prioritize education and correct violations through information. However, education will not facilitate compliance in all cases, and when necessary, a recycling ordinance provides fines and other penalties to achieve compliance.



**"SCS develops recycling policies and ordinances that provide communities with the resources to correct recycling practices of residents and businesses, address open dumping, and encourage increased participation in waste diversion programs."**

### Sustaining Recycling by Reducing Contamination in Recyclables | City of Kirkwood, MO | SCS and EESI

---



Since 2018, over 100 local governments ceased collecting recyclables due to dramatically increasing costs. Until 2018, Kirkwood received revenue from their recyclables, which offset some of the costs associated with managing them. Kirkwood's recycling facility operator closed their doors in October 2018 because of the National Sword. Kirkwood paid the new facility approximately \$100 per ton to process and market their recyclables. This fee applies to the "good" recycling collected and the contaminants in recyclables. Kirkwood wanted to minimize contamination in their recyclables to minimize the fees paid to the third-party recycling processor.

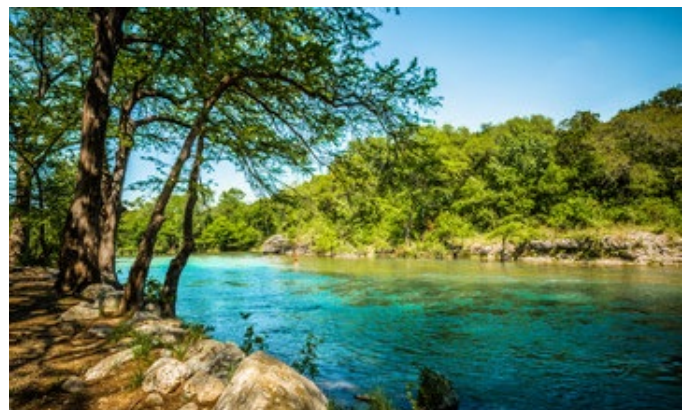
In November 2019, Kirkwood's Public Services Department contracted with SCS and EESI (SCS Team) to characterize the contaminants in their curbside recycling program and design an education campaign to decrease contamination. The characterization indicated that the average contamination rate was 15%, and contamination on some routes was as high as 28%. **As a result of the campaign, overall contamination decreased to 7%.**

### Developing a Sustainable Solid Waste System | New Braunfels, TX | Firms: SCS and EESI

---

New Braunfels, just outside San Antonio, is in one of the fastest-growing areas in the nation. Due to rapid population growth, capacity limitations at existing waste disposal facilities, and the desire to increase waste diversion, the City hired SCS and EESI to complete a comprehensive solid waste management plan (CSWMP) to meet its needs during a 20-year planning period.

The CSWMP provides goals and strategies to ensure adequate landfill capacity for future growth, facility development, and service expansion to meet the community's disposal needs now and in the future.



### **Fostering an Equitable National Waste Management Vision |** St. Lucia, Waste Indies/United Nations Environmental Program | EESI

---

Like many Caribbean Islands, St. Lucia is a nation with vast differences in income and influence on solid waste management decisions. Visitors pay up to \$1,000 a night at a luxury hotel where solid waste collectors earn less than \$20 a day to pick up 8 tons of trash. While waste collection was available on the island, the less affluent communities did not receive reliable service.

Karen worked with Saint Lucia Solid Waste Management Authority (SLWMA) and the Ministry of Education, Innovation, Gender Relations and Sustainable Development, Science and Technology (MEIGRSD) to include all residents, especially those in underrepresented communities, to develop a national waste vision.



Karen facilitated a National Waste Management Vision Workshop for SLWMA, where persons from various communities, ministries and government departments, statutory agencies, and the private sector attended. The workshop was one of the strategies used to get broad-based input into a National Solid Waste Management Strategic Plan for Saint Lucia. Karen collaborated with SLWMA to develop online and in-person surveys to ascertain all residents' solid waste goals and concerns. Karen also met with educators, informal recyclers, hospitality workers, waste collectors, and homeless residents.

As a result of this planning process, Saint Lucia developed a five-year strategic action plan to ensure consistent and efficient waste collection. This plan also identified opportunities to use waste as a local resource for local businesses to manufacture products on the island, educate children on the importance of proper waste management, develop a system to recover plastic bottles and develop long-term disposal capacity.

### **Reducing Operating Expenses to Increase Recycling |** Odessa, TX | SCS and EESI

---

The City of Odessa's population growth increased due to the expanded development of the oil and gas resources in the Permian Basin. The unexpected increase meant preparing for their growing community's demands and competing for human resources. The city focused on developing a solid waste management master plan to ensure their long-term goals were sustainable fiscally and operationally. Their needs emphasized a comprehensive financial review to implement a cost control model and strategy.



To create operational and financial sustainability in Odessa, the SCS Team:

- Conducted a cost/benefit analysis on reducing the waste collection from twice to once a week, which will save the city over 1 million a year
- Revised the municipal code to require private haulers to provide collection and recycling data to receive a license
- Recommended subscription-based, curbside recycling and standardized materials accepted at drop-off recycling sites
- Developed a 10-year capital improvement plan to assure the city had 25% capital operating reserves
- Helped the city procure a new recycling processor and establish fair and equitable terms to the city and processor

The Odessa Planning Process identified opportunities to save the solid waste division over \$1.5 million annually, 84% of its annual operating budget.

### [Aligning Solid Waste with Climate Change | US EPA | EESI](#)

---

Karen served on a consortium to help USEPA create the Waste Reduction Model (WARM) and was the lead author of the associated manual “Local Waste Reduction Efforts Can Turn Down the Heat on Global Warming.”

WARM is a tool that calculates and totals the GHG emissions, energy savings, and economic impacts of baseline and alternative waste management practices, including source reduction, recycling, combustion, composting, anaerobic digestion, and landfilling. The model calculates emissions, energy units, and economic factors across a wide range of material types commonly found in municipal solid waste in the following categories:

- Metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>E)
- Energy units (million British Thermal Units - BTU)
- Labor hours
- Wages
- Taxes



Individuals and organizations ranging from state and local governments, solid waste planners, students, small businesses, and other organizations interested in GHG emissions and energy have used WARM to assess the environmental and economic impacts of materials management decisions.

***The WARM initiative was the first national effort to establish a correlation between solid waste management and global climate change.***



## Achieving Climate Action Plan Goals | Greensboro, NC | SCS and EESI

Greensboro, North Carolina, adopted resolutions that commit the city to develop a 20-Year Strategic Energy Plan (SEP) and goals to transition to 100% renewable energy. The SEP builds on the 2007 commitment to reduce GHG emissions. Two goals directly impact Greensboro's solid waste operations:



- Establish specific steps to reduce gas emissions from City operations by 40% or more from estimated 2005 levels by 2025
- Transition to 100% renewable energy in City operations by 2040

SCS and EESI worked with Greensboro to establish a baseline of GHG emissions from collecting, processing, and disposal of municipal solid waste and developing options to reduce these emissions. The options may include:

- Increasing participation in existing recycling and composting programs
- Targeting food waste for recovery
- Using alternative fuels in solid waste collection vehicles
- Improving collection efficiency
- Converting waste into energy
- Disposing of waste in landfills with landfill gas to energy systems

The SCS Team developed feasibility factors for these options based on technical, regulatory, social impact, infrastructure, and financial impact requirements. We will then facilitate work sessions to align the feasibility factor with the options and prioritize selected opportunities for short-term (2025) and long-term implementation.

## Zero Waste Initiatives | Prince George's County, MD | SCS

Prince George's County partnered with SCS to develop Zero Waste Initiatives the County could pursue to reduce the quantity of waste going to their landfill. To encourage collaboration, County staff and the SCS team identified various groups and individuals interested in the County's actions on zero waste. These stakeholder groups were contacted and interviewed by the SCS team to obtain their input on the programs and policies the County should pursue to achieve zero waste.



Using the feedback from groups and input from the County, SCS identified program options for increasing the diversion of materials from key waste generator sectors, including commercial, residential (both single-family and multi-family), and institutional. Opportunities to improve existing programs were identified, as well as new options for increasing diversion and reducing

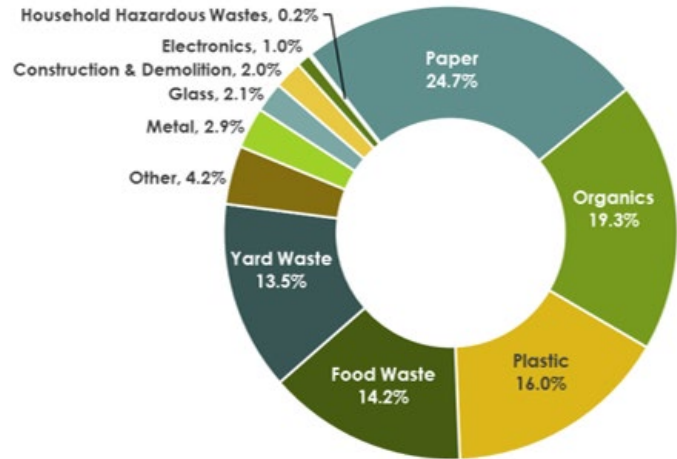
the toxicity of waste in the County. SCS presented the Draft Zero Waste Strategic Plan at two public meetings hosted by the County.

### Waste Characterization Studies | Mid-Atlantic U.S. | SCS

---

SCS has conducted dozens of waste characterization studies for varying sized municipalities across the U.S. over the past five years. Recent waste characterization studies conducted in the Mid-Atlantic region included the following jurisdictions:

- Buncombe County, NC in 2022
- Virginia Beach, VA in 2023
- Chesapeake, VA in 2023
- Montgomery County, MD in 2022 and 2017
- 



These characterization studies were fundamental in targeting materials for landfill diversion and will serve as a roadmap for High Point's diversion initiative.



## Conflict of Interest





## 5.0 CONFLICT OF INTEREST

We have no conflict of interest with any contractor or key individual for this contract or services.



# Section 6

## Cost and Timeline





## 6.0 COST AND TIMELINE

The SCS Team has prepared a budget that details staff time, materials, and travel costs by task according to the Statement of Work in Section 3 of our proposal. In preparing our budget, we have tried to be realistic and reasonable. The table below provides the key staff's hourly rates. The Cost Proposal Form is provided at the end of this section. The detailed timeline for the project based on the scope of work is provided on the following page.

Key Staff Hourly Rates






<u>Title</u>	<u>Name</u>	<u>Rate \$/Hour</u>
Project Manager	Quinn	\$275.00
Project Director	Demers	\$230.00
Stakeholder Engag.	Luken	\$125.00
Project Advisor	Leonard	\$350.00
Organics Specialist	McCarron	\$255.00
Zero Waste Specialist	Dieleman	\$185.00
Financial Support	Modlin	\$170.00
Staff Professional	Steffens	\$125.00



### Proposed Project Timeline

SCOPE OF WORK	WEEKS																											
	JUN '24				JUL '24				AUG '24				SEP '24				OCT '24				NOV '24							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
<b>NOTICE OF AWARD</b>																												
Assume Notice to Proceed by June 14, 2024																												
<b>PHASE 1</b>																												
<b>Task 1 - Project Initiation and Project Management</b>																												
Kick-Off Meeting																												
Monthly Progress Meetings (3rd week of each month)																												
<b>Task 2 - Solid Waste System Assessment</b>																												
Develop Localized Waste Stream Projections																												
Assess Solid Waste System Vulnerabilities																												
Audit & Gap Analysis of City Policies, Plans, Programs																												
Presentation Materials																												
<b>Task 3 - Funding/Revenue Mechanisms and Cost</b>																												
Revenue Projection																												
Expense Projection																												
Capital Program Review																												
Financial Management Plan																												
<b>PHASE 2</b>																												
<b>Task 4 - Diversion Strategy and Implementation Roadmap</b>																												
Identify Draft Diversion Strategies																												
Planning Meeting																												
Assess and Prioritize Diversion Strategies																												
Develop Draft Implementation Roadmap																												
Finalize Implementation Roadmap																												
<b>Task 5 - Develop &amp; Submit Solid Waste Master Plan</b>																												
Develop Draft Solid Waste Master Plan																												
Develop Draft Code Recommendation Document																												
SWMP Presentation to Public																												
Finalize the SWMP and Code Recommendation Doc.																												

	Indicates Weeks with Holidays (Juneteenth, Independence Day, Labor Day, Thanksgiving)
	SCS Review of Documents and Research to Support SWMP
	Meetings with City and SCS
	Deliverable to Stanford
	Indicates City Review Period

**PROPOSAL FORM**  
**Solid Waste Feasibility Study**  
**RFP 47-053024**

**Instructions:**

Please utilize the Scope of Work and Expected Deliverables in developing your cost proposal.

The proposal shall include pricing for all services. Pricing shall be inclusive unless otherwise indicated. The proposal shall itemize all services, including any hourly rates for all professional, technical and support personnel as well as all other charges related to completion for a fully functioning system. The proposal shall include a total cost not to be exceeded. (Please add lines/descriptions if necessary)

A separate page describing hourly rates for team members and any expected hard costs should be provided as part of the cost proposal.

The City reserves the right to contact Proposers on cost and scope clarification at any time throughout the selection process.

Description (Process; Deliverable)	Cost
Phase 1: Task 1 - Project Initiation and Management	\$10,580
Phase 1: Task 2 - Solid Waste System Assessment	\$ 16,390
Phase 1: Task 3 - Funding/Revenue Mechanisms and Costs	\$ 22,950
Phase 2: Task 4 - Diversion Strategy and Implementation Roadmap	\$ 22,220
Phase 2: Task 5 - Development & Submission of Solid Waste Master Plan	\$ 21,488
<b>Total Cost</b>	<b>\$ 93,628</b>

I certify that the contents of this proposal are known to no one outside the contractor, and to the best of my knowledge all requirements have been complied with.

SCS Engineers

---

**Company Name**

Charlotte                      NC                      28273

---

**City    State    Zip**

SDemers@scsengineers.com

---

**E-mail**



---

**Authorized Signature**

May 30, 2024

---

**Date**

703-929-2986    703-471-6676

---

**Telephone    Fax**





# Attachment

# A

## Required Forms

**REFERENCES**  
**Solid Waste Feasibility Study**  
**RFP 47-053024**

1. Vendor Name: Buncombe County Solid Waste Department  
Vendor Contact: Dane Pedersen, Solid Waste Director  
Vendor Phone Number: 828-250-5460  
Vendor Address: 81 Panther Branch Road, Alexander, NC 28701  
Type of Project: Waste Diversion Strategy  
Length of Project: 8 months
  
2. Vendor Name: Arlington County VA Department of Environmental Service  
Vendor Contact: Douglas Krietemeyer, Environmental Sustainability Planner  
Vendor Phone Number: 703-228-0443  
Vendor Address: 4300 29th Street, S. Arlington, VA 22206  
Type of Project: Zero Waste Plan  
Length of Project: 2 years
  
3. Vendor Name: Pennsylvania Department of Environmental Protection  
Vendor Contact: John Nantz, Program Analyst  
Vendor Phone Number: 717-787-0120  
Vendor Address: 400 Market Street Harrisburg, PA 17101  
Type of Project: Recycling Technical Assistance  
Length of Project: Currently in Year 1 of our second 3-year contract

**REFERENCES**  
**Solid Waste Feasibility Study**  
**RFP 47-053024**

1. Vendor Name: Yakima County Public Services-Solid Waste Division  
Vendor Contact: Karma Suchan, Manager  
Vendor Phone Number: Desk: 509-574-2455, Cell: 509-571-4219  
Vendor Address: 7151 Roza Hill Drive Yakima, WA 98901  
Type of Project: Solid Waste Management Plan and Rate Study  
Length of Project: 1 year

2. Vendor Name: City of New Braunfels, TX  
Vendor Contact: Leann Guenther  
Vendor Phone Number: 830-221-4038  
Vendor Address: 424 S Castell Ave | New Braunfels, TX 78130  
Type of Project: Solid Waste Management Plan and Rate Study  
Length of Project: 1 year

3. Vendor Name: \_\_\_\_\_  
Vendor Contact: \_\_\_\_\_  
Vendor Phone Number: \_\_\_\_\_  
Vendor Address: \_\_\_\_\_  
Type of Project: \_\_\_\_\_  
Length of Project: \_\_\_\_\_



ATTACHMENT C

**FINANCIAL STABILITY**

Each Vendor shall certify it is financially stable by completing ATTACHMENT C: CERTIFICATION OF FINANCIAL CONDITION. The City of High Point is requiring this certification to minimize potential issues from Contracting with a Vendor that is financially unstable. From the date of the Certification to the expiration of the Contract, the Vendor shall notify the City of High Point within thirty (30) days of any occurrence or condition that materially alters the truth of any statement made in this Certification.

**ATTACHMENT C: CERTIFICATION OF FINANCIAL CONDITION**

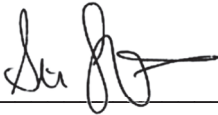
---

Name of Vendor: Stearns, Conrad and Schmidt, Consulting Engineers, Inc. dba SCS Engineers

The undersigned hereby certifies that: [check all applicable boxes]

- The Vendor is in sound financial condition and received an unqualified audit opinion for the latest audit of its financial statements.  
Date of latest audit: 12/31/2023
- The Vendor has no outstanding liabilities to the Internal Revenue Service or other government entities.
- The Vendor is not the subject of any current litigation or findings of noncompliance under federal or state law.
- The Vendor has not been the subject of any past litigation or findings of any past litigation or findings of noncompliance under federal or state law that may impact in any way its ability to fulfill the requirements of this Contract.
- He or she is authorized to make the foregoing statements on behalf of the Vendor.

**If any one or more of the foregoing boxes is NOT checked, explain the reason in the space below or add additional pages.**

  
\_\_\_\_\_

Steve Liggins, VP/CFO  
\_\_\_\_\_

Authorized Signature

Printed Name and Title

ATTACHMENT D

STATE OF ~~NORTH CAROLINA~~ Virginia AFFIDAVIT  
CITY OF ~~HIGH POINT~~ County of Fairfax  
\*\*\*\*\*

I, Stacey Demers (the individual attesting below), being duly authorized by and on behalf of  
SCS Engineers (the entity bidding on project hereinafter "Employer") after first being duly sworn  
hereby swears or affirms as follows:

- 1. Employer understands that E-Verify is the federal E-Verify program operated by the United States Department of Homeland Security and other federal agencies, or any successor or equivalent program used to verify the work authorization of newly hired employees pursuant to federal law in accordance with NCGS §64-25(5).
- 2. Employer understands that Employers Must Use E-Verify. Each employer, after hiring an employee to work in the United States, shall verify the work authorization of the employee through E-Verify in accordance with NCGS§64-26(a).
- 3. Employer is a person, business entity, or other organization that transacts business in this State and that employs 25 or more employees in this State. (Mark Yes or No)
  - a. YES X, or
  - b. NO
- 4. Employer's subcontractors comply with E-Verify, and if Employer is the winning bidder on this project Employer will ensure compliance with E-Verify by any subcontractors subsequently hired by Employer.

This 30 day of May, 2024

Stacey J. Demers

Signature of Affiant  
Print or Type Name: Stacey Demers

State of Virginia County of Fairfax

Signed and sworn to (or affirmed) before me, this the 30  
day of May, 2024

My Commission Expires: April 30, 2027  
[Signature]  
Notary Public



**AFFIDAVIT-MINORITY PARTICIPATION**

The City of High Point is committed to providing equal opportunities for participation in all aspects of the City of High Point contracting and purchasing programs including, but not limited to, participating in procurement contracts for, materials, services, construction and repair work activities, and lease agreements in the City of High Point. The Purchasing Division actively seeks to identify qualified minority, handicapped, disadvantaged, and women-owned business enterprises so as to widen opportunities for participation as providers of goods and services, increase competition and ensure the proper and diligent use of public funds.

**(NOTE: THIS FORM IS TO BE SUBMITTED WITH THE BID PROPOSAL)**

**Portion of the Work to be performed by Minority Firms**

SCS Engineers I do hereby certify that on the \_\_\_\_\_

(Name of Bidder)

High Point Solid Waste Feasibility Study

(Project Name)

Project ID# 47-053024

Amount of Bid \$93,628

I will expend a minimum of 0 % of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the firms listed below.


Attach additional sheets if required

Name and Phone Number	Minority Category	HUB Certified (Y/N)	Work Description	Dollar Value

\*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**) Employee Stock Ownership Plan (ESOP)

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: May 30, 2024 Name of Authorized Officer: Stacy Demers

Signature: 

Title: Vice President





# Attachment B

## Key Staff Resumes

## VITA QUINN, MBA

### Education

MBA – Finance/Real Estate Development, Nova Southeastern University, Florida  
 BS - International Economics, Florida Atlantic University, Florida

### Professional Affiliations

Solid Waste Association of North America – Board of Directors  
 American Public Works Association – Member

### Professional Experience

Ms. Quinn has 18 years of experience working with public sector entities as a management consultant and financial analyst. She has developed financial sustainability solutions for various general governments, enterprise funds, and quasigovernmental entities. Her areas of expertise include non-ad valorem special assessment development, fiscal impact analysis, cost-benefit analysis, capital planning, impact fee development, and bond feasibility analysis. Her utility experience includes cost apportionment and rate/fee/tax design for solid waste, recycling, stormwater, water, and sewer.



## RATE STUDIES/COST OF SERVICE/MASTER PLANS

- City of Myrtle Beach, SC – Solid Waste Collections Rate & Transfer Station Tipping Fee Study
- City of Santa Ana, CA – Sanitation Rate Study
- City of Davis, CA – Solid Waste Rate Study
- City of Grand Rapids, MI – Solid Waste Rate Study
- City of Greenville, SC – Solid Waste Rate Study
- Recology, CA – Detailed Solid Waste Rate Review
- City of Brownsville, TX – 5-Year Financial Services/Rate Studies
- Stanford University, CA – Annual Solid Waste Rate Studies
- City of Cocoa, FL – Integrated Water and General Fund Financial Sustainability Analysis, Regional Water Rate Development
- City of Fort Lauderdale, FL – Solid Waste Cost Allocation & Rate Design
- Indian Creek Village, FL – Water Revenue Sufficiency Analysis & Stormwater Rate Study
- Village of Pinecrest, FL – Stormwater Fee Study and Update
- Greenville County, SC – Solid Waste Tipping Fee Study
- Cass County, IA – Landfill Revenue Sufficiency Analysis
- City of Council Bluffs, IA – Landfill and Recycling Center Revenue Sufficiency Analysis
- City of Coconut Creek, FL – Water & Wastewater Utility Rate Study
- City of Monrovia, CA – Hauler Rate Analysis
- Reno County, KS – Annual Rate Model Updates/Reserve Calculation
- Nassau County, FL – Water & Sewer Rate Study, Miscellaneous Fee/Charge Development
- Junction City, OR – Water, Sewer, & Sanitation Rate Study
- City of Sheridan, WY – Water, Sewer, & Solid Waste Rate and Financial Plan Updates
- City of Sheridan, WY – Tipping Fee Study and Financial Assurance Estimates

- City of New Braunfels, TX – Solid Waste Management Plan Update and Rate Studies
- City of Bristol, VA – Solid Waste Collection Rate Study
- Collier County, FL – Landfill Expansion Analysis
- City of Tempe, AZ – Solid Waste Cost Allocation & Rate Design
- Nashville Metro Waste, TN – Cost-Benefit Analysis of C&D Recycling and Model Development
- City of Port Orange, FL – Water & Sewer Rate Study
- Okaloosa County, FL – Water & Wastewater Revenue Sufficiency and Bond Feasibility
- City of Wauchula, FL, Solid Waste Rate Study
- City of Cape Coral, FL – Water & Wastewater Rate Study
- City of Denton, TX – Water Utilities Rate Design Study and Utility Benchmarking
- City of Galveston, TX – Water and Sewer Rate Study and Benchmarking Analysis
- City of Grand Island, NE – Landfill Tipping Fee Study and Capital Feasibility Analysis
- Culver City, CA – Solid Waste Rate Studies
- City of Dothan, AL – Environmental Services Rate Study
- City of Alliance, NE – Landfill Revenue Sufficiency Analysis
- City of Virginia Beach, VA – Solid Waste Revenue Sufficiency Analysis
- City of Atlanta, GA – Solid Waste Rate Study
- City of West Palm Beach, FL – Solid Waste Rate Study
- Yakima County, WA – Solid Waste Management Plan and Rate Study
- City of Odessa, TX – Solid Waste Management Plan
- City of Killeen, TX – Solid Waste Rate Study
- City of St. Cloud, FL – General Fund & Utility Integrated Analysis (Water, Sewer, Bulk Water)
- Village of New Lothrop, MI – Wastewater/Stormwater Asset Management Plan Funding
- Clay County Utility Authority, FL – Water & Sewer Revenue Sufficiency Analysis, Lakes Replenishment Program Funding Analysis, and Comparative Impact Fee Study
- Town of Mount Dora, FL – Stormwater Rate Study
- City of Neptune Beach, FL – Water & Sewer Revenue Sufficiency Analysis
- City of Clearwater, FL – Water, Sewer, and Solid Waste Revenue Sufficiency Analysis
- City of Orange Cove, CA – Hauler Cost of Service Rate Study
- Tully Environmental, NY – Bid Rate Development for NYC – Queens Zones
- Tully Environmental, NY – Operational Cost Estimate for Transfer Stations and MRF in Westchester County

## FUNDING/BOND FEASIBILITY/OPERATIONAL ANALYSIS

- City of Anaheim, CA – Revenue Analysis and On-Call Financial Services
- Island County, WA – Transfer Station Funding Analysis
- Waste Management, USA – Cost-Benefit Analysis of Facility Automation
- Baltimore County, MD – Scalehouse Operational and Transfer Fee Analysis
- Manatee County, FL – Cost-Benefit Analysis of Waste to Energy Plant Repairs
- The Recycling Partnership – Analysis of Recycling Program Alternatives
- Dane County, WI – Analysis of Debt Funding, New Site Development, Rate Alternatives
- Oklahoma City, OK – Analysis of Brownfields Capital Projects Funding/Database
- City of San Antonio, TX – Analysis of MRF Alternatives / PPP
- Okaloosa County, FL – Revenue Bond Feasibility Analysis, Utility Privatization Study
- Chittenden Solid Waste District, VT – Compost Business Analysis / PPP

- Stanford University, CA – Zero Waste Program Assistance
- City of Omaha, NE – Bid Evaluation Forms for Capital Financing
- City of Bristol, VA – Solid Waste Independent Cost Analysis and Evaluation of Landfill Alternatives
- City of Dubuque, IA – Financial Analysis of Alternative Composting Technologies
- City of Waynesboro, Virginia – Solid Waste Collections System and Recycling Evaluation
- City of Lynchburg, Virginia – Solid Waste Collections System Evaluation & Enterprise Fund Financial Plan
- City of Glendale, CA – Solid Waste Rate Matrix and Miscellaneous Fee Development
- City of Odessa, TX – Fleet Rental Rate Analysis
- Manatee County, FL – Facility Location Breakeven Analysis
- City of San Diego, CA – Transfer Station Sizing Alternatives Analysis
- City of Davis, CA – SB 1383 Planning and Financial Feasibility Analysis
- Salinas Valley Solid Waste Authority, CA – SB 1383 Planning and Cost Analysis
- City of Los Alamos, NM – Composting Alternatives and Financial Feasibility Analysis
- Los Angeles County, CA – Organics Alternative Technology Comparative Analysis
- Mattress Recycling Council, CA – Analysis of Disposal Alternatives
- Chittenden Solid Waste District, VT – MRF Cost Benefit and Financial Feasibility Analysis
- SAWS, WY – Water Rate Study of Joint Powers Board Alternatives
- Butte County, CA – Solid Waste Management Plan

## GENERAL GOVERNMENT/FISCAL IMPACT/TAX PROGRAMS

- Albemarle County, VA – Fiscal Impact Analysis of Moving County Facilities / PPP
- City of Odessa, TX – Fleet Rental Rate Analysis
- Town of Longboat Key, FL – Beach Renourishment Tax Program Update
- Plant City, FL – General Fund Fiscal Impact Consulting
- City of Anaheim, CA – Facilities Services Revenue Sufficiency and Labor Rate Calculation
- City of Fort Lauderdale, FL – General Government & Utility Integrated Analysis (Water, Sewer, Regional Wastewater, Stormwater, Sanitation, Airport, Parking, Building Funds)
- City of Temple Terrace, FL – Solid Waste and General Fund Integrated Analysis
- City of Zephyrhills, FL – General Fund Financial Sustainability Analysis
- Indian Creek Village, FL – General Government Financial Sustainability Analysis
- City of Lynn Haven, FL – Fiscal Impact Analysis
- City of Fort Myers, FL – General Fund Financial Sustainability Analysis
- City of New Port Richey, FL – General Fund and Utility Integrated Financial Sustainability Analysis, General Fund Indirect Cost Allocation
- City of Orange Cove, CA – Indirect Cost Allocation Analysis

## SPECIAL ASSESSMENTS

- Town of Golden Beach, FL – Technology Services Assessment
- Collier County, FL – MSBU Redistricting Analysis
- Indian Creek Village, FL – Road Capital Assessment
- Okeechobee County, FL – Fire/EMS Assessment
- City of Sarasota, FL – Parking Garage Assessment Development



- City of Anaheim, CA – Resort Maintenance Assessment District Assessment Analysis
- DeSoto County, FL – Landfill Operations Revenue Sufficiency Analysis, Landfill Capital Assessment Revenue Sufficiency Analysis and MSBU Update
- City of Coconut Creek, FL – Fire Assessment
- Village of Pinecrest, FL – Water Capital Assessment
- Miami Shores Village, FL – Water & Sewer Capital and Maintenance Assessments
- City of Orange City, FL – Stormwater Assessment and Enterprise Fund Development
- City of North Port, FL – Road & Drainage District Assessment Roll Updates
- Putnam County, FL – Fire Protection Assessment Development
- The Villages Community Development District, The Villages, FL – Non-Ad Valorem Assessment Allocation
- Coral Springs Improvement District, FL – General Fund Stormwater Assessment
- Alachua County, FL – Fire Assessment
- Lealman Fire District, FL – Fire Assessment
- City of Casselberry, FL – Street Lighting Assessment

## IMPACT FEES

- Cedar Hammock Fire District, FL – Fire Impact Fee Update
- City of Sheridan, WY – Water & Sewer Plant Investment Fees
- City of St. Cloud, FL – Water & Sewer Impact Fees
- City of Deltona, FL – General Government Impact Fee Updates (Parks & Recreation, Police, Fire, Transportation, Library)
- City of Glendale, CA – Peer Review of Franchise Fee and Vehicle Impact Fee Calculation

## OTHER MANAGEMENT CONSULTING PROJECTS

- Fresno County, CA – Hauler Rate Negotiations
- Council Bluffs, IA – Utility Billing Analysis
- City of Atlanta, GA – Expert Witness Services
- Stanford University, CA – Annual Hauler Rate Negotiations
- Broward County, FL – Waste Generation & Waste Composition Studies
- Broward County, FL – Revenue Development for Independent Solid Waste Authority
- City of El Segundo, CA – Procurement Forms
- Orange County, FL – Model Development for Financial Assurance Costs & Reporting
- Private Client, CA – Municipal Rate/Budget Review

## STACEY TYLER DEMERS, LEED® AP

### Education

B.S. - Statistics, Virginia Polytechnic and State University, 1989

### Professional Licenses

LEED® Accredited Professional



### Professional Affiliations

Past Director, Sustainable Materials Management Technical Division, Solid Waste Association of North America (SWANA)

### Professional Experience

Ms. Demers provides SCS with strong technical and analytical skills in planning, statistics, sample design for environmental programs, and modeling. Project activities have included, program assessments, data analyses, database management, sampling protocols, and associated field sampling specific to sustainability metrics. Ms. Demers has 27 years of experience in the environmental field focusing on diversion programs and energy. Examples of her project experience include:

#### **Zero Waste / Solid Waste Management Plans**

**Zero Waste Plan, Arlington County, VA.** Project Director to identify, assess, and plan implementation for zero waste strategies to be implemented in the next 20 years. Strategies were based on costs, impact to County's waste diversion rate and greenhouse gas reductions. Directed presentations to the Solid Waste Advisory Committee and responsible for final review prior to submittal.

**Waste Diversion Strategies, Buncombe County, NC.** Project Director to develop multiple strategies that the County could implement to enhance their waste diversion program. Based on results of a waste characterization study conducted for the County concurrently, estimated impacts of waste reduction strategies on annual landfilled quantities.

**Solid Waste Management Plan, Prince William County, VA.** Project Manager to develop a plan that provides a guide to the County for its existing and future solid waste management needs. Worked in a collaborative effort with County staff and stakeholders to tailor programs and policies to the needs and specific conditions of the County and its incorporated towns.

**Zero Waste Strategic Initiatives, Prince George's County, MD.** Project Manager to assess and evaluate the County's waste diversion programs and practices and identify options for reducing waste and increasing waste diversion through reuse, recycling, and composting programs. Engaged multiple stakeholders to identify gaps and recommend options for progress toward zero waste goals.

**Landfill Life Extension Study, Wake County, NC.** Project Director to identify potential strategies for maximizing the life of the South Wake Landfill through recycling, technology, and other related initiatives. SCS assessed the viability of these options within the County's system and evaluated the financial implications for implementation.

**Development of a Regional Recycling Strategy for the Cities of Killeen, Copperas Cove, Harker Heights, and Gatesville and Fort Hood Army Installation, Texas.** Project Manager to assess the feasibility and increased efficiency of developing a regional recycling program. SCS developed approaches that varied in complexity: from sharing resources to significant capital investment in a centrally located Material Recovery Facility.

**Comprehensive Review of Solid Waste Collections, Transportation, and Disposal Options, Town of Chapel Hill, NC.** Task Leader to identify opportunities to enhance existing collection recycling collection services, improve efficiencies, and evaluate the applicability of innovative technological developments in the solid waste industry.

## Collection Studies

**Improving Efficiency and Equity of Municipal Waste Collection Services, City of College Park, MD.** Project Director to evaluate the curbside collection of trash, yard waste, recycling, and bulky waste and recommend methods to improve efficiency and reduce program abuses. Developed practical and implementable solutions for continued high service to all residents and presented these recommendations to City Council.

**Modeling Cost of Service for Residential and Commercial Organics Collection, City of Long Beach, CA.** Lead Analyst to evaluate the costs for compliance with pending legislation in California that requires source separation of organics. Estimated the growth in segregated organic materials as the program matures, additional equipment and labor needs, and facility options.

**Evaluation of Collection Services for Trash, Recyclables, Yard Trimmings and Bulky Items, City of Oklahoma City, OK.** Task Leader to evaluate Oklahoma City's residential solid waste collection system and provide recommendations for future changes in services. Ms. Demers observed collection operations and evaluated the efficiency of both City and private contractor crews in "urban" and "rural" geographic service areas. Additionally, Ms. Demers conducted a benchmarking study of collection operations and associated costs for other municipal collection programs, both regionally and nationwide.

**Evaluation of Waste and Recycling Collection, Rockbridge County, VA.** Project Director to evaluate a series of issues and alternatives appropriate for a rural County's waste collection, transportation, disposal, and recycling functions. SCS evaluated the efficiency of the County's network of staffed and unstaffed waste and recycling collection centers and recommended a restructured network for enhanced services.

## Waste Diversion

**Recycling Options Analysis, Leon County and the City of Tallahassee, FL.** Lead Analyst to assess current recycling conditions in the County and City, estimate future recycling needs, and develop alternative recycling scenarios involving multiple facilities and collection scenarios.

**Assessing New Recycling Strategies in Light of China National Sword Policies, Frederick County, VA.** Project Director to assess options to reduce costs, improve efficiencies, and reduce transportation and processing costs related to the effects of China's National Sword Policies. SCS evaluated the county's options for utilizing various out-of-county processing facilities, partnering with neighboring communities, developing a facility to condense materials, and collaborating with the private sector.

**Evaluation of Regional Recycling Options, Northern Shenandoah Valley Regional Commission, VA.** Project Director to evaluate regional recycling options that would improve efficiencies and reduce escalating transportation and processing costs related to China's National Sword Policies. Researched options for rail haul to distant markets, developing a centralized processing facility, utilizing a recycling broker, and regional procurement options.

**Feasibility of Organic Waste Diversion of Residential Facilities, University of Maryland.** Project Director for a study to assess types of materials generated by two different types of residential facilities (traditional style dormitory and apartments/suites) and evaluate the feasibility of an organic diversion program. SCS surveyed the experiences of other universities that had implemented some type of organic diversion program in residential facilities, recommended materials to include in the program and other logistics (equipment, collection, aggregation, transportation, staffing), and estimated capital costs and maintenance costs for the program.

**Assessment of Waste Diversion Potential, City of Waco, TX.** Task Manager to research and review waste characterization studies conducted for other U.S. cities of similar characteristics as the City of Waco. Developed a large matrix that compared waste composition for a variety of municipalities to assess the potential impact of various recycling and composting programs.

**Bottle and Can Recycling by Commercial Establishments, Fairfax County, VA.** Project Director to study impacts on local businesses from a regulatory requirement to recycle cans and bottles. Oversaw internet research to identify other jurisdictions that have implemented bottle and can recycling ordinances. Estimated the quantity of cans and bottles that could be recycled from businesses in Fairfax County and the economic and environmental impacts associated with disposal as compared to recycling.

**Waste Diversion Assessment, Mid-America Regional Council, MO.** Project Director to develop a benchmarking tool to assess the progress of 55-member communities in meeting the adopted waste diversion goals. Using available information supplied by MARC, SCS categorized jurisdictions according to the services, policies, and infrastructure related to waste diversion. The benchmarking process involved a four-step process:

1. Identify parameters for benchmarking recycling activities
2. Assess recycling/diversion activities currently in-place for each community
3. Assign a point value for these activities
4. Establish a rating for each community's recycling activities.

SCS presented the results of the benchmarking process to the MARC Board and developed a spreadsheet tool that could be used to update future programs.

## Waste Characterization Studies

Project Director, lead analyst, and/or advisor for waste characterization studies to assess waste diversion programs, identify recycling and waste diversion opportunities, and/or evaluate the feasibility of waste-to-energy and anaerobic digestion facilities. Recent clients include:

- Alameda County, CA (2024, 2018)
- ReGen Monterey, CA (2024)
- Marin County, CA (2022)
- Pitkin County, CO (2022)
- Broward County, FL (2022)
- City of San Jose, CA (2017-2022)
- Sonoma County, CA (2022, 2014)
- Montgomery County, MD (2022, 2017)
- New Jersey Statewide (2022)
- Santa Cruz County, CA (2019)



## Publications and Presentations

Demers, S. and Latulippe, D., “Value from Waste” Presented at the SWANA SOAR Conference, April 17, 2024.

Demers, S. “Factors that Impact Contamination in Recyclables” Presented at the Global Waste Management Symposium, February 16, 2022.

Demers, S. “Waste-to-Energy and Zero Waste – Is There Common Ground?” Presented at the North American Waste-to-Energy Conference (NAWTEC), April 2, 2019.

Demers, S. “What’s in Your Recycling? Ways to Assess Contamination,” Presented at the Annual Virginia Recycling Conference, May 8, 2019.

Demers, S. “What Are We Wasting? Information Gained Through Waste Characterization Studies”, Quarterly Recycling Program Managers Meeting, Metropolitan Washington Council of Governments, January 31, 2019.

Demers, S. “Plastics Sorting Best Management Practices,” Webinar presentation sponsored by the Association of Plastic Recyclers, September 25, 2018.



---

**KAREN M. LUKEN**  
**CEO, Economic Environmental Solutions International**

During the last 30 years, Karen has helped communities worldwide design strategies to solve complex, technically feasible, financially viable, and socially acceptable environmental problems. Her facilitation experience has enabled her to transform strategic recommendations into action items that convert waste into a resource for green products and renewable energy.

Before founding Economic Environmental Solutions International (EESI), she served as:

- The Global Environmental Director, Clinton Foundation's Climate Initiative (CCI)
- Senior Director, R.W. Beck
- Director, Hamilton County, Ohio Solid Waste District
- Project Manager, SCS Engineers

## PROFESSIONAL AFFILIATIONS

- Chair of American Public Works Association National Solid Waste Committee
- Recycling Chairman for the U.S. Conference of Mayors
- National Strategic Planning Certification Instructor for the Solid Waste Association of North America (SWANA)
- Ohio delegate at a White House Recycling Summit
- Steering committee member for U.S State Department's Clean Climate Air Coalition

## EDUCATION

Bachelor of Arts – Communications and Political Science, University of Cincinnati, 1986

## RELEVANT PROJECT EXPERIENCE

### **Sustainable Materials Management Facilitation**

**State of Iowa Sustainable Materials Management Plan** – The Iowa Department of Natural Resources (IDNR) desired a stakeholder-driven process to update and modernize Iowa's 40+-year-old solid waste management laws and regulations, establish a clear path, and build a sustainable materials management (SMM) system. Karen was part of a team that conducted extensive research and facilitated approximately 30 meetings that:

- Established SMM priorities
- Evaluated the applicability to Iowa of SMM implementation processes in other states
- Conduct life cycle analysis (LCA) on materials to gauge public health and environmental impacts of materials management from extraction, manufacture, distribution, consumption, reuse, and end-of-life management; and
- Identified strategies to implement SMM policies, programs/facilities, funding measures, and progress metrics in Iowa

**Caribbean Waste Management Visioning Sessions** - The implementation of sustainable waste management systems in island nations is critical as waste management directly impacts the state of the environment, the well-being of humans, and, ultimately, the economy. The United Nations Environmental Programme (UNEP) contracted with Karen to conduct visioning sessions with national ministers and solid waste authority directors to inventory the existing solid waste management systems throughout the Caribbean to assess strengths and weaknesses and begin establishing a platform for a regional solid waste action plan that promotes an environmentally and financially sustainable solid waste management system in the region.

**Saint Lucia National Waste Strategy** - Karen worked with the island nation of Saint Lucia to develop a national waste strategy to manage their waste for the next 20 years to promote international development while ensuring a sustainable infrastructure for national residents and businesses. To accomplish this, she

- Engaged all relevant stakeholders to determine goals and vision to decrease dependency on landfills by converting waste into a resource
- Assessed the strengths and weaknesses of the existing waste management system; benchmark the current waste management system against similar systems
- Evaluated solid waste technical, programmatic, regulatory, and financial pathways to implement the national strategy recommendations

**State of Ohio Legislative Visioning Sessions** - The County Commissioners Association of Ohio (CCAO) sought assistance to guide discussions with CCAO, the Organization of Solid Waste Districts of Ohio (OSWDO) and their members to proactively develop strategies in anticipation of changes to Ohio's current solid waste management law (HB 592). Karen facilitated five work sessions with the Ohio solid waste districts to foster consensus on the legislative priorities and guide discussions with Ohio EPA, the Ohio General Assembly, and other stakeholders interested in changing Ohio's solid waste law.

**Rio de Janeiro, Brazil Market Waste Recovery** - Karen worked with the Municipal Secretariat of the Environment (SMAC) to assess the feasibility of recovering organic waste generated at the CEASA produce market. She also collaborated with market employees to design an education campaign to help reduce the amount of contaminants in the organic waste stream sent to the composting facility to maximize the conversion of organic waste into high-value compost. This project was part of a larger program to increase the compost production capacity to meet the demand, especially for the SMAC reforestation programs. It also improved the quality of the compost produced to extend its use to applications in agriculture.

**Dar es Salaam, Tanzania Comparative Analysis of Anaerobic Digestion and Composting to Manage Organics** - Karen supported the Dar es Salaam City Council to evaluate the viability of converting food waste from produce markets into biogas or compost by:

- Prepared a preliminary business case analysis
- Facilitated a steering committee and technical working group
- Assessed compost markets
- Revised the initial preliminary business case analysis based on the compost market assessment
- Developed and issued a Request for Qualifications/Proposals (RFQ)/(RFP) and evaluating and ranking submittals

**City of Lagos, Nigeria Integrated Waste System Improvement** - Over three years, Karen helped the Lagos Waste Management Authority (LAWMA) improve their waste system by:

- Raised awareness amongst leaders within Lagos State and Nigerian National government about the potential to improve environmental, social and economic conditions
- Established a regulatory framework and funding mechanism to manage solid waste properly
- Structured a public-private partnership (PPP) to replace dump sites with an integrated solid waste management complex, which would include an organics composting facility, materials recycling center, and a professionally engineered and operated residual waste landfill.

**Honolulu, HI Curbside Recycling** - Karen conducted a series of studies on Honolulu’s refuse system, including a cost-and-benefit analysis of various curbside recycling options and the comparative benefits of recycling and waste-to-energy. She presented the results of these studies and addressed concerns at seven community meetings that the mayor’s office coordinated. Ms. Luken also testified at Honolulu City Council meetings and recommended the second refuse collection day with curbside recycling. City council adopted this program.

**Wal-Mart Food Waste Composting Financial Feasibility Study.** Wal-Mart desired to divert food waste from their Houston superstores but did not want to increase their waste management costs. Tipping fees at the Houston composting facility were slightly lower than at the landfill. However, a food waste diversion program would require Walmart’s waste hauler to establish additional food waste routes. Karen and Wal-Mart collaborated with their Houston hauler to design a pilot program and establish a parameter to balance high waste collection costs with lower processing fees. The pilot indicated that food waste recovery was compatible with their business model, which catalyzed Wal-Mart to implement food waste recovery systems in most U.S. and Canadian stores.

**Sustainable Materials Management Planning**

Karen works with communities and institutions worldwide to create progressive but pragmatic strategies to divert waste from landfills. These strategies include programs, policies, and facilities for sustainable materials management, pollution prevention, reuse, recycling, composting, and converting waste into energy:

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>▪ Hamilton County, Ohio</li> <li>▪ Henry County, Ohio</li> <li>▪ Preble County, Ohio</li> <li>▪ Mercer County, Ohio</li> <li>▪ Cuyahoga County, Ohio</li> <li>▪ Portage County, Ohio</li> <li>▪ Stark-Tuscarawas-Wayne Counties, Ohio</li> <li>▪ Adams-Brown County, Ohio</li> <li>▪ Lorain County, Ohio</li> <li>▪ Greene County, Ohio</li> <li>▪ Solid Waste Authority of Central Ohio</li> <li>▪ Clark County, Ohio</li> </ul> | <ul style="list-style-type: none"> <li>▪ Allen County, Indiana</li> <li>▪ St. Louis County, Missouri</li> <li>▪ Olathe, Kansas</li> <li>▪ University of Kansas</li> <li>▪ Sarasota County, Florida</li> <li>▪ Bucks County, Pennsylvania</li> <li>▪ Odessa, Texas</li> <li>▪ Fresno County, California</li> <li>▪ Yakima County, Washington</li> <li>▪ Temple, Texas</li> <li>▪ New Braunfels, Texas</li> <li>▪ Lincoln, Nebraska</li> <li>▪ Honolulu, Hawaii</li> <li>▪ Kauai County, Hawaii</li> <li>▪ St. Lucia, West Indies</li> </ul> |
|--|--|



- Lagos, Nigeria
- Dar es Salaam, Tanzania
- Johannesburg, South Africa
- Mahe, Seychelles
- Male, Maldives
- Delhi, India
- Hanoi, Viet Nam
- Kampala, Uganda
- Tashkent, Uzbekistan
- Addis Ababa, Ethiopia

## Solid Waste and Climate Change

*The New York Times* recently reported, “The researchers said that decades of buried trash is releasing methane, a powerful greenhouse gas, at higher rates than previously estimated. “We’ve largely been in the dark, as a society, about actual emissions from landfills,” said Mr. Duren, a former NASA engineer and scientist. This study pinpoints the gaps.”

For almost two decades, Karen has raised awareness about the relationship between disposing of organic waste and climate change. Relevant projects include:

### **Ghana Material Flow Analysis and Greenhouse Gas Mitigation Opportunity Identification**

- Through the Canadian measuring, reporting, and verification (MRV) for Climate Action, Karen is currently facilitating the development of composting facilities in Ghana that will significantly decrease greenhouse gas emissions and improve national health and environmental conditions. Karen is conducting a material flow analysis (MFA)—with waste stream characterization of municipal solid waste in all 16 regions of Ghana. The MFAs will be a tool for analyzing and managing waste flows, secondary products (e.g. compost), and residues. In addition to identifying GHG emission reduction opportunities and other benefits, Karen will conduct a comparative financial analysis and generate marginal abatement cost curves (MACCs).

**The City of Greensboro, North Carolina, Strategic Energy Plan** – Greensboro adopted resolutions that commit the city to develop a 20-Year Strategic Energy Plan (SEP) and goals to transition to 100% renewable energy. The SEP builds on the 2007 commitment to reduce greenhouse gas emissions (GHG). Two goals directly impact Greensboro’s solid waste operations:

- Establish specific steps to reduce gas emissions (city operations) by 40% or more from estimated 2005 levels by 2025
- Transition to 100% renewable energy in city operations by 2040

Karen was part of a team that worked with Greensboro to establish a baseline of GHG emissions from collecting, processing, and disposal of municipal solid waste and developing options to reduce these emissions. The options included:

- Increasing participation in existing recycling and composting programs
- Targeting food waste for recovery
- Using alternative fuels in solid waste collection vehicles
- Improving collection efficiency
- Converting waste into energy
- Disposing of waste in landfills with landfill gas to energy systems

We developed feasibility factors for these options based on technical, regulatory, social impact, infrastructure, and financial impact requirements. We then facilitated work sessions to align the

feasibility factor with the options and prioritize selected opportunities for short-term (2025) and long-term implementation.

**USEPA WARM Model** - Karen served on a consortium to help USEPA create the Waste Reduction Model (WARM) and was the lead author of the associated manual *Local Waste Reduction Efforts Can Turn Down the Heat on Global Warming.*”

WARM is a tool that calculates and totals the GHG emissions, energy savings, and economic impacts of baseline and alternative waste management practices, including source reduction, recycling, combustion, composting, anaerobic digestion, and landfilling. The model calculates emissions, energy units, and economic factors across a wide range of material types commonly found in municipal solid waste in the following categories:

- Metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>E)
- Energy units (million British Thermal Units - BTU)
- Labor hours
- Wages
- Taxes

Individuals and organizations ranging from state and local governments, solid waste planners, students, small businesses, and other organizations interested in GHG emissions and energy can use WARM to assess materials management decisions’ environmental and economic impacts. The WARM initiative was the first national effort to establish a correlation between solid waste management and global climate change.

## BRENT DIELEMAN, TRUE ADVISOR

### Education

B.A. - Environmental Studies: Biotic/Physical World, Dordt University, 2003

### Specialty Certifications

Green Building Certification, Zero Waste True Advisor

### Professional Affiliations

Iowa Society of Solid Waste Operators

Iowa Recycling Association

Solid Waste Association of North America (SWANA), member

SWANA Sustainable Materials Management Division, Program Committee Member



### Professional Experience

Mr. Dieleman is a Project Manager with SCS Engineer's Sustainable Materials Management Division. Brent has 19 years of solid waste planning experience, including 10 years helping communities develop and execute solid waste management plans and 15 years managing and directing waste characterization studies and audits. Mr. Dieleman's planning experience includes short- and long-term solid waste planning services, including evaluating current solid waste infrastructure/identifying new infrastructure/facility needs, exploring funding sources, developing zero waste plans, engaging stakeholders, and building consensus for waste diversion initiatives, conducting public education and outreach with an emphasis on equity considerations, recycling technical assistance, analyzing organics management technologies, measuring recycling contamination, and researching industry trends. Select examples of Brent's most recent solid waste project planning experience include:

#### **Solid Waste Project Planning**

**10-Year Solid Waste Management Plan, Howard County, MD;** Brent is the Project Manager leading the development of the County's new 10-year solid waste management plan for the period 2025-2034. He is responsible maintaining the project schedule and budget, developing a plan that meets the solid waste planning requirements for the State of Maryland, and engages community stakeholders to receive their input on solid waste planning issues.

**Solid Waste Management Plan, Harford County, MD;** Brent is the Project Manager leading the development of the County's new 10-year solid waste management plan for the period 2025-2034. He is responsible maintaining the project schedule and budget, developing a plan that meets the solid waste planning requirements for the State of Maryland, and engages community stakeholders to receive their input on solid waste planning issues.

**Twenty-Year Solid Waste Management Plan/Zero Waste Planning Services, Arlington County, VA:** Brent serves as the lead writer in drafting the County's new 20-year solid waste management plan; planning activities completed to date include develop a draft outline of the plan, research of state planning requirements, prioritize waste diversion initiatives (includes estimating initiative costs and greenhouse gas impacts), presentations to the Solid Waste Advisory Committee (SWAC), and draft portions of the plan.

**Buncombe County Waste Diversion Plan, NC:** Brent collaborated with the County to develop a waste diversion study that was adopted and approved by the County Board of Supervisors on November 1, 2022; Brent worked with County staff to identify waste diversion priorities to be studied as part of the plan; he quantified the potential impacts each initiative could have on waste disposal and diversion in the County and produced a plan for the County to achieve high diversion rate.

**Compost Design Services, Blessing Greenhouse & Compost Facility, Inc., DE:** Brent supported existing design and budgeting efforts by investigating the grant application process for the USDA's Fertilizer Production Expansion Program.

**Waste and Recycling Characterization Studies, Various Clients, including Iowa Department of Natural Resources (DNR).** Brent has managed over 30 solid waste and recyclable material characterization studies over his 14 year career at SCS Engineers; this includes managing the Iowa DNR Statewide Waste Characterization Study in 2017 and providing advisory support for the 2022 statewide study; Brent designs and executes all aspects of these studies that range in complexity from a one-week, one material stream study to a multi-season, multi-stream, and multi-facility study that depends on the needs of the client.

**Recycling Planning and Assessment Studies, Frederick County, VA; Northern Shenandoah Valley Planning Commission**

Current recycling markets have strained municipal and private entity recycling programs. Brent has worked with clients to explore options for modifying current recycling programs in order to improve program resiliency and facilitate long-term sustainability. This work includes assessing contaminants in recycling program streams in an effort to inform public education activities and negotiate fair contracts with recycling processors. This work often includes engaging with processors and others to understand contamination issues prior to working with a client and evaluating a specific program.

**Solid Waste Collection Study, City of College Park, MD.** Brent recently completed solid waste collection program evaluations that analyzed aspects of the City's bulky refuse, brush, and regular refuse and recycling collection programs. Many of these programs were inefficient and program costs had increased significantly over the last several years. Mr. Dieleman led a team of staff to complete field observations and ride-alongs with collection personnel to understand the day-to-day challenges with the programs. With an understand of the issues, Brent facilitated meetings with City staff to discuss potential program updates and changes, which included requiring containerized refuse and recyclable materials, limiting bulky item collections, and charging fees for excess amounts of materials. The project concluded with Mr. Dieleman presenting the results and recommendations to the City Council where all recommendations were adopted.

**Recycling Technical Assistance, Pennsylvania Department of Environmental Protection, PA.** Mr. Dieleman has provided recycling technical assistance to nearly 35 local governments to help overcome challenges to waste diversion and program inefficiencies. Projects include evaluating pay-as-you-throw systems, commercial recycling improvements, curbside collection of food waste, curbside collection of yard waste, and modernizing local recycling ordinances. A major focus of Brent's work for PADEP has been to help local governments evaluate existing curbside and drop-off recycling programs and make recommendations for how the programs can improved. Recommendations about scope of services, materials accepted, collection frequency and schedule, and material preparation guidelines are developed.

**Zero Waste Strategic Plan, Prince George's County, MD.** Brent developed and documented the County's strategy to reduce the quantity and toxicity of waste generated and increase the proportions of waste diverted to recycling and composting programs. A key objective of this project was to



engage with stakeholders in the County to receive their feedback and ideas for what the County could prioritize in their plan.

**Waste Diversion Initiatives, Montgomery County, MD.** Mr. Dieleman supports the County's efforts to evaluate programs and increase the amount of material diverted from disposal. Projects include multi-family and commercial recycling distance surveys, identifying undocumented recycling activities, and waste characterization.

**Mandatory Commercial Organics Recycling Compliance Study, Los Angeles County Department of Public Works, CA.** Brent researched the requirements of California's AB 1826 that requires businesses and multi-family properties to recycle organic materials from their waste stream. He developed recommendations for Los Angeles County to consider implementing the requirements of this law within the County's existing franchised hauler agreements.

### **Material Characterization Studies**

**Miami-Dade County, Division of Solid Waste Services FL, Source Separated Recyclable Material Contamination Study (2023);** Mr. Dieleman designed and led field activities for Miami-Dade County, Division of Solid Waste Services residential recyclable material characterization study. Brent designed a representative sampling plan to quantify the composition of source-separated recyclable materials from each of the County's three collection zones. A total of 100 samples were obtained and sorted over a two-week period. The results of the study provided the County with important information used to design education and outreach programs. The study was unique in that it measured the impact of recycling contamination on acceptable program recyclable materials.

**Huntsville Solid Waste Disposal Authority, AL, Municipal Solid Waste (MSW), Source Separated Recyclable Material Contamination Study, and Construction/Demolition Debris (2023);** Brent worked with the Huntsville Solid Waste Disposal Authority staff to implement a comprehensive characterization study to measure the composition of several material streams managed by the Authority. The study was also designed to understand what changes there have been in waste stream composition from the Authority's previous 2013 study. A total of 130 material samples were characterized as part of this study. Among other things, the data was used to understand the mix of recyclable materials that would be received at a potential new material recovery facility developed by the Authority.

### **Publications and Presentations**

Dieleman, B, "Considerations for Implementing a Curbside Food Scraps Collection Program," *Waste Advantage Magazine*, May 2023

Dieleman, B, "Adapting Recycling Programs to Changing Market Conditions," Virginia Recycling Association, October 2021.

Dieleman, B, "Case Studies in Successful School Recycling Programs," Pennsylvania Association of School Board Officials, March 2021.