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

**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 7waste 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.

Transfer Station Siting Study, Prince George’s County MD. Project Manager to develop and execute four public meetings that educated residents and other stakeholders about waste management issues and the construction and operation of a solid waste transfer station. Based on community feedback and best engineering practices, SCS developed criteria for siting a solid waste transfer station. The County used the developed criteria to select potential sites and SCS performed an engineering assessment on the top-rated sites. Ms. Demers presented the results of the public meetings, siting criteria, and the engineering assessment to the Planning Board and County Council.

**Transfer Station Needs Assessment, District of Columbia, Benning Road, and Fort Totten.** Project Manager and lead author for the D.C. Department of Public Works engineering study to assess existing private and public solid waste transfer facilities and the need for siting new facilities. Examined waste flow capacity, zoning, and other regulatory constraints, potential health impacts, transportation alternatives, and expansion alternatives.

**Feasibility of Franchised Collection Study, Montgomery County, MD.** Project Manager to evaluate the feasibility of increasing commercial and multi-family recycling in the County by implementing alternative waste collection methods for businesses and multi-family properties. Tasks included researching alternative collection methods of comparable jurisdictions, benchmarking participation and collection costs to businesses and multi-family properties, and developing implementation scenarios for various alternative collection plans.

**Automated Collection Study, Montgomery County, MD** Project Manager and lead author to evaluate the feasibility of instituting automated or semi-automated refuse collection in the County’s Refuse Collection District. Detailed program information was acquired from other jurisdictions utilizing automated refuse collection to assess potential changes in operations, equipment, staffing, and funding. Conducted interviews with private haulers and focus groups of County residents to solicit opinions and concerns regarding the implementation of automated refuse collection.

Waste Diversion

**Recycling Options Analysis, Leon County and the City of Talahassee, 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.

**Recycling Program Development for Public Schools, Government Buildings, and Community College Facilities, Mecklenburg County, NC.** Project Director to examine waste generation, collection, and recycling for Charlotte-Mecklenburg Schools, Central Piedmont Community College, and County Facilities. Oversaw sampling plan development, field sampling, interviews with facility recycling managers, and site tours. SCS also researched innovative recycling programs at other school systems, colleges, and government facilities, particularly where there are concrete examples of efficient recycling/waste reduction programs. Using these programs as examples, SCS provided the County with ways to mimic and integrate the successful aspects of other recycling/waste reduction programs.

**Waste Reduction and Recycling Study, Pentagon Reservation.** Project Manager to characterize waste generation at the Pentagon and to develop and recommend improvements to the Pentagon’s recycling program. SCS prepared several recycling program components, including a detailed map of recycling bin placement; a recycling handbook for building managers; a recycling brochure for Pentagon occupants; articles about recycling for newsletters; a database for tracking monthly waste and recycling tonnages and associated revenue; and organization of a recycling slogan contest, recycling posters, and logo.

**Evaluation of Special Waste Handling, Anne Arundel County, MD.**  Project Manager for an evaluation of the County’s current special waste programs, analysis of operational and fiscal practices, development of special waste collection options, and recommendation on best management practices for special waste handling, recycling and disposal. Materials studied included household hazardous waste (HHW), e-waste, and latex paint.

**Solid Waste and Recycling Studies, Montgomery County, MD.** Project Manager for several small- and large-scale projects including:

* **Non-Residential Waste Generation Study.** Project Manager for a study to estimate waste generation rates for 69 business type classifications. Results of the study support County-assessed fees for solid waste management and recycling services. Ms. Demers managed the first study in 2000 that included a survey of over 2,200 properties and manual field measurements from almost half of these properties. Ms. Demers also managed follow-up studies in 2009 and 2016 to verify waste generation estimates through coordination with a local hauler using an onboard scale and GPS system.
* **Multi-Family Blue Bag Recycling Pilot Study.** A pilot study to assess the effects of recycling programs at multi-family properties through the use of the blue bag for collection. This included measuring recycling quantities, participation, and contamination of recyclables before and after issuing residents blue bags at six multi-family properties.
* **Multi-Family Recycling Distance Study.** This study assessed the effect various distances from multi-family dwelling units to communal recycling collection areas on recycling quantities and rates. Waste and recycling quantities were measured for five weeks at 30 multi-family properties encompassing a wide variety of distances (from less than 100 feet to over 600 feet), property types (high rise, midrise, and garden style), and recycling container placement styles (same floor, basement, parking lot). The final report included a summary of project activities, a statistical analysis of the data, and recommendations on the proximity of recycling collection areas to dwelling units.
* **Multi-Family In-Unit Recycling Bin Study.** This study assessed the effect of various types of in-unit recycling bins on recycling quantities and rates. Bin types included a container with a sliding divider, a hard-plastic basket-type bin, and a divided mesh bag. Waste and recycling quantities were measured at nine multi-family properties for four weeks prior to the distribution of in-unit recycling bins and then for four weeks after distribution. The final report included a summary of project activities, a statistical analysis of the data, and recommendations on types of in-unit recycling bins to use to maximize recycling.
* **Cooperative Recycling Pilot Program.** Conducted a recycling pilot program for five selected small businesses in Silver Spring, Maryland. Information and data gathered was used to identify and quantify materials not previously recycled. Two waste sorts per week were conducted for a total of seven weeks and findings were summarized to determine the feasibility of these businesses joining together and procuring a common recycling collection contract for recyclable materials.
* **Research Assistance on Lightweighting of Materials.** Project Manager to research impacts on recycling programs resulting from the light-weighting of recyclable materials involving changes in a container size and construction, material composition, and usage. Compiled data from trade organizations and associations, recycling processors, and industry experts to assess impacts.
* **Waste Audit of Selected Businesses.** Project Manager to identify strategies for capturing additional material in the recycling program for selected business types. Project activities included waste characterization; facility tours and interviews; identification of business practices that generated large and homogeneous waste streams; and analyses of trends in the waste stream.
* **Documentation of Commercial Recycling Activity.** Project Manager to seek out commercial recycling activity not previously reported in annual reports. Contacted over 1,000 small businesses to estimate the types and quantities of material recycled and the processors/markets that receive recyclable materials. Findings were compiled and summarized to be used in the annual calculation of the County’s recycling rate.

Financial Modeling

**Modeling the Development of a Leftover Paint Management System, Product Stewardship Institute.** Project Director for the model development of a nationally-coordinated leftover paint management system that is cost-effective, efficient, and offers the best economies of scale. SCS estimated leftover paint quantities in the U.S., approximated the number of collection points necessary to provide various levels of service and convenience, assessed existing paint processing capacity, and conceptualized an aggregation and transportation system. SCS then developed a system-level cost estimate for capitalization and operation on a per-unit paint sales basis.

**Utility Fee Assessment and Waste Generation Study, Rivanna Solid Waste Authority (RSWA), VA.** Project Manager and lead analyst for the evaluation and establishment of a solid waste utility fee for all RSWA services and improvements above those funded through existing fees. SCS reviewed financial information for the solid waste system and projected revenue and funding necessary for RSWA operations and obligations. A survey was conducted to estimate the waste generated by households and businesses (by business type) in the RSWA service area. Using this information, SCS developed several combinations of tipping fees and utility fees necessary to cover RSWA funding needs.

**Waste Generation Study in Support of a Solid Waste Utility Fee, Southeastern Public Service Authority, VA.** Project Manager and lead analyst to accurately estimate the quantities of waste generated and managed in the service area by each participating community (eight jurisdictions). Developed an estimate of the amount of commercially-collected waste based on demographic data and other available information related to waste generation trends and factors. Based on waste generation estimates, researched methods to implement a waste utility fee.

Sustainability Assessments and Energy Audits

**Sustainability Audits, General Services Administration, Virginia and West Virginia**. - Project Manager on a collaborative effort with Eaton Corporation in 2011/12 to identify compliance with LEED for Existing Buildings Operations and Maintenance (LEED EB O&M), Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings, and GSA’s Strategic Sustainability Performance Plan (SSPP). The audit summarized information gathered during fieldwork and developed a work plan for complying with the sustainability requirements. Additionally, the report recommended procedures and equipment necessary for full compliance.

**Retro-Commissioning Services (RCx), US Department of Veterans Affairs (VA), New England Healthcare System, New York/New Jersey Healthcare System, and Great Lakes Healthcare System** – Project Manager for a collaborative effort with RetroCom Energy Strategies, Inc., and EMC Engineers, Inc., a subsidiary of Eaton Corporation, to retro-commission 24 medical centers comprising over 21 million square feet. This project involves the planning and investigative phases which entails adjusting operations, making simple repairs, and identifying low-cost operational and maintenance improvements that can enhance energy efficiency and help avoid the need for major equipment replacement. Additionally, more capital-intensive corrective actions and costs for energy efficiency and other improvements will be identified. The goals of these RCx projects are to achieve improved indoor air quality, comfort, controls, extended systems life, reduced operation and maintenance costs, energy and resource efficiency, and reduced energy costs.

**Energy and Water Audits, National Park Service, National Capital Region**. Project Manager to perform energy and water audits in 2010 in accordance with ASHRAE’s Level II energy audit guidance. Audit functions included reviewing building and equipment data, interviewing site personnel, analyzing utility rate information, observing energy-related equipment operation, and performing a meter inventory. SCS audited 179 buildings comprising 648,000 square feet of varying uses, including administrative offices, operational and maintenance services, visitor centers, recreational spaces, and historical buildings. SCS identified Energy Conservation Measures (ECMs) that could save electricity, heating oil, propane, and natural gas consumption with an annual savings of $105,000 and water savings of 2.9 million gallons.

**Energy and Water Audits, General Services Administration, Region 8, Rocky Mountain Region**. Project Manager on a collaborative effort with Abraxas Energy Consulting to examine 10 buildings in 2010 to identify energy and water savings opportunities. Energy Conservation Measures (ECMs) were identified that could save electricity, heating oil, propane, and natural gas consumption with an annual savings of $57,000 and water savings of 259,000 gallons.

**Waste Composition Services for LEED Compliance, The Tower Companies, Virginia and Maryland.** SCS conducted waste characterization services at the Tower Building in Rockville, Maryland and the Millennium Building in Washington, DC in October 2008. The waste assessment was used in the application for LEED certification through the US Green Building Council.

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. We also have assessed organic streams, MRF residuals, and construction/demolition debris.

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| States | |
| * Iowa Statewide (2022,2017) * Wisconsin Statewide (2021) | * Delaware Solid Waste Authority (1996) |
| Municipalities | |
| * 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, 2013, 2009, & 1996) * Mercer, Burlington, & Passaic Counties, NJ (2021-2022) * Monterey Regional Waste Management Authority, CA (2021, * Santa Cruz County, CA (2019) * Culver City, CA (2018) * Alameda County, CA (2018) * Union City, CA (2016) * City of Santa Monica, CA (2016) * Prince George’s County, MD (2015) * Anne Arundel County, MD (2014, 2010, 2005, & 1999) * City of Chula Vista, CA (2015) * Chittenden Solid Waste District, VT (2015) * Santo Domingo, Dominican Republic (2014) * Montgomery County, OH (2014) | * Prince William County, VA (2014) * City of Norfolk, VA (2014) * City of Sausalito, CA (2013) * City of Huntsville, AL (2013)Hamilton County, OH (2012) * Mecklenburg County, NC (2012) * City of Charlotte, NC (2012) * Chatham County, NC (2011) * Wake County, NC (2011) * New Hanover County, NC (2011) * Orange County, NC (2010, 2005, 2000, 1995, & 1990) * City of Cleveland, OH (2010) * Development Authority of the North Country, NY (2010) * Montreal, Quebec, Canada (2002) * Delaware Solid Waste Authority (DSWA), DE (1997) * Greater Lebanon Refuse Authority, PA (1996) * DuPage County, IL (1996) * City of Philadelphia, PA (1995) * Binghamton County, NY (1995) * Onondaga County, NY (1994) |
| Institutions | |
| * University of Maryland (2015, 2013, 2014, 2009, 2008, 2002) * Wake County Public Schools (2014) * Proctor and Gamble Headquarters, Cincinnati, OH (2015) | * The Tower Companies, Washington, DC and Rockville MD (2008) * U.S. Pentagon (2007) * Naval Security Station (1994) |
| Businesses | |
| * Arcola Health & Rehabilitation Facility * Fitzgerald Auto Mall * Gold’s Gym * Mother of God Private Elementary School * Pizza Hut Restaurant * Aramark Corporation * American Occupational Therapy Association * Army Research Laboratory * Nuclear Regulatory Commission * American Postal Workers Union Health Plan | * La-Z-Boy Furniture Store * Asbury Methodist Retirement Village * CleanerMax Drycleaner * Hilton Hotel & Conference Center * Potomac Community Center * Soccerplex Stadium and 21 playing fields * Trader Joe’s Grocery * 7-Eleven Convenience Store * Roozen’s Garden Center * Arcade Florist |

### Publications and Presentations

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.

Demers, S. “Laying the Groundwork for Zero Waste,” Presented at the Annual Virginia Recycling Association Conference, May 5, 2015.

Marc J. Rogoff and Stacey Demers, “Dissecting Waste Streams,” *Renewable Energy from Waste Magazine*, December 2014.

Demers, S. “Increasing Efficiencies of Solid Waste Collection Programs,” Presented at the Annual SWANA Old Dominion Chapter Conference, August 8, 2014.

Demers, S. “Zero Waste Implementation Plans,” Presented at the Annual Maryland Recycling Network Conference, June 19, 2014.

Demers, S. “Assessment of University of Maryland Recycling Program Results,” Presented at the 5th Joint Conference of the Maryland Recycling Network and SWANA's Mid Atlantic Chapter, June 25, 2009.

Demers, S. “Beyond the Bin: Lessons Learned in Venue and Event Recycling,” Presented at the Recycling Council of Alberta’s Annual Fall Conference, September 28, 2007.

Demers, S. “Converting Your HHW Program from Periodic Collection Events to a Permanent Facility,” Presented at the Maryland Recycling Coalition & SWANA’s Mid-Atlantic Chapter Joint Conference, June 8, 2005.

Demers, S. “Hazardous Waste Management for Maryland Small Quantity Generators,” Presented at the SWANA Mid-Atlantic Chapter Annual Meeting/Technical Seminar, Harford, MD, September 10, 2004.

Demers, S. “Effects of Lightweighting on Recycling Rates.” Presented at the SWANA Mid-Atlantic Chapter Annual Meeting/Technical Seminar, Rockville, MD, March 14, 2003.

Demers, S. “Making Solid Waste Management Plans Work.” Presented at the 10thAnnual SCS Engineers Virginia Landfill & Landfill Gas Seminar, Roanoke and Richmond, VA, April 24 and 25, 2003.

Demers, S. “Making Solid Waste Management Plans Work.” Presented at the SWANA Old Dominion Chapter Annual Meeting/Technical Seminar, Richmond, VA, September 20, 2002.

Demers, S. “Waste Imports to Virginia from Howard and Anne Arundel Counties.” Presented at the SWANA Old Dominion Chapter Annual Meeting/Technical Seminar, Staunton, VA, June 20, 1997.

Demers S. and J. Savage. “Composition Studies: Get to Know Your Waste.” *World Wastes*, January 1996.

Demers, S. “Statistical Evaluation of Groundwater Monitoring Data.” Presented at the 3rd Annual SCS Engineers Virginia Landfill & Landfill Gas Seminar, VA Beach and Richmond, VA, June 6and 7, 1995.

Demers, S. “EPA New Source Performance Standards Emissions Model.” Presented at the SWANA Mid-Atlantic Chapter Annual Meeting/Technical Seminar, Ellicott City, MD, September 22, 1994.

Demers, S. and J. Savage. “Waste Stream Evaluation Draws Attention to C&D.” *World Wastes*, July 1994.

Savage, J. and S. Tyler (Demers). “Comparison of Visual and Manual Classification. Techniques to Estimate Non-Residential Waste Stream Composition.” Presented at the Second U.S. Conference of MSW Management, June 1992.