STACEY TYLER DEMERS, LEED® AP

Education

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

Professional Licenses

LEED® Accredited Professional

Professional Affiliations

Vice Director, Recycling and Special Waste 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 22 years experience in the environmental field focusing on solid waste and energy. Examples of her project experience include:

Solid Waste Studies

Zero Waste Strategic Plan, Prince George's County, MD. Project Manager to develop and document 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. SCS is addressing the potential impacts to the County operations from a variety of program options. Ms. Demers will prepare and lead stakeholder workshops to present the Zero Waste Strategic Plan concept and process.

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

Recycling Feasibility Study for Cities of Killeen, Copperas Cove, Harker Heights, and Gatesville and Fort Hood Army Installation, Texas. Project Manager to assess feasibility of developing a regional recycling program. By combining resources, the four cities and Fort Hood can create a regional recycling program that will reduce operating costs, increase material recycled, and provide a framework for continued growth. SCS collected data from interviews, research, existing reports, and facility tours in the area. SCS developed approaches to a regional recycling program that varied in complexity: from little capital investment to significant program modifications. For each option, SCS assessed equipment needs, estimated revenue, greenhouse gas savings, and waste disposal costs. Additionally, SCS assessed the effects of implementing Pay-As-You-Throw (PAYT) and Residential Curbside Single-Stream Recycling 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.

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 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 results of the public meetings, siting criteria, and the engineering assessment to the Planning Board and County Council.

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.

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.

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.

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.

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 Reduction and Recycling Study, University of Maryland. Project Manager to determine specific and cost-effective programmatic strategies to insure the campus was able to achieve and maintain the state mandated recycling goal. Project activities included waste characterization of facility types, evaluation of existing program operations, comparison of recycling programs at peer institutions, and identification of waste reduction strategies.

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

- **Alternative Collection Study.** Evaluated 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 costs to County businesses and multi-family properties for

collection, and developing potential scenarios and implementation plans for various alternative collection plans.

- **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 a follow-up study in 2008/09 to verify waste generation estimates through coordination with a local hauler using an on-board scale and GPS system.

- **Multi-Family Blue Bag Recycling Pilot Study.** Pilot study to assess the effects on recycling programs at multi-family properties through use of blue bag for collection. 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, mid rise, 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 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, as 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 distribution of in-unit recycling bins and then for four weeks after distribution. at nine multi-family properties. 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 assist with researching impacts on recycling rates resulting from the light-weighting of recyclable materials involving classifying changes in a materials size, composition, and usage. Calls were made to trade organizations and associations, processors of the

materials, and industry experts to aid in determining the impacts from these materials on the overall County recycling rate.

- **Waste Audit of Selected Businesses.** Project Manager to identify strategies for capturing additional material in the recycling program for five selected businesses. Project activities included waste characterization to determine recyclable material in the waste stream; discussions with the recycling coordinator of each business about deficiencies in the recycling program; identification of business practices that generated large and homogeneous waste streams; analysis of trends in the waste stream based on annual reports submitted to the County.

- **Documentation of Commercial Recycling Activity.** Project Manager to seek out commercial recycling activity not previously reported in annual reports. Over 400 medium and large businesses and 1,000 small businesses were contacted to determine the types and quantities of material recycled, the method of transporting material to a processor or market, and name, address, and phone number of processor. Findings were compiled into a spreadsheet and summarized into a final report that was used to calculate the County's annual recycling rate.

- **Automated Collection Study.** 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 Composition Protocol Development.** This project was the first element of a two-phase project to develop and execute a comprehensive waste stream composition study. Responsibilities included developing a 4-season, statistically valid sample design, and creating a PC-based computer model to project waste stream generation and composition.

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.

Solid Waste Composition Studies

Project Director for waste composition studies to assess waste diversion programs, identify recycling and waste diversion opportunities, and evaluate feasibility of waste-to-energy facilities for the following jurisdictions:

- Sonoma County, CA (2014)
- Montgomery County, OH (2014)
- Prince William County, VA (2014)
- Wake County Public Schools, NC (2014)
- Anne Arundel County, MD (2014, 2010, 2005, and 1999)
- City of Norfolk, VA (2014)
- City of Sausalito, CA (2013)
- City of Huntsville, AL (2013)
- Montgomery County, MD (2013, 2009, and 1996)
- 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, and 1990)
- City of Cleveland, OH (2010)

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 on 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.

Publications and Presentations

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 10th Annual 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 6 and 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.