

# The State of Nebraska

Department of Administrative Services (DAS)

Material Division

State Purchasing Bureau (SPB)

## FOUR-SEASON MUNICIPAL WASTE CHARACTERIZATION STUDY



**NEBRASKA**  
Good Life. Great Resources.

**Department of Environment and Energy**  
*Air Water Land Energy*

RFP: 6897 Z1  
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Procurement Contract Officer(s)  
State Purchasing Bureau  
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JULY  
**15**  
2024



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July 15, 2024

Connie Heinrichs / Kelly Rowlands, Procurement Contract Officer(s)  
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Submitted via ShareFile

**Subject: Four-Season Municipal Waste Characterization Study (RFP Number 6897 Z1)**

Stearns, Conrad, and Schmidt, Consulting Engineers, Inc. dba SCS Engineers (SCS) has been performing waste and recycling characterization services throughout the United States (US) for more than 30 years. In fact, you might say that SCS wrote the book on performing characterization studies. In 1973, SCS developed the first national method for conducting waste composition studies for the U.S. Environmental Protection Agency (U.S. EPA). This method was used as the basis for the ASTM Standard D5231-92 (2024) "Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste," which is widely recognized today as the national standard. While the principal material categories, methodologies, and equipment used to perform these services may have changed over the years, SCS remains committed to providing the highest standard of quality and project completeness.

SCS understands and appreciates the importance of ensuring consistency, uniformity, and accuracy for the State of Nebraska, Department of Administrative Services, Material Division, State Purchasing Bureau, (State) Solid Waste Infrastructure for Recycling (SWIFR) Four-Season Municipal Waste Characterization Study (Study) project. We understand the State and other waste and recycling stakeholders across Nebraska need to have relevant and reliable data for measuring progress in existing waste diversion programs and planning for future efforts. To support these efforts, our methods will follow ASTM D5231-92 (2024) standards and we will work closely with the State staff and selected participating facilities to develop a detailed work plan that is clear and concise, is replicable for future efforts, and allows for comparison to the 2009 Waste Characterization Study (2009 Study) and other identified regional/national characterization results.

The SCS project team will work with the State staff and other stakeholders (i.e., Nebraska Recycling Council, Nebraska SWANA Cornhusker Chapter, recycling processing facilities, collection and hauling companies, etc.), industry waste and recycling generation data sources (i.e., US EPA, CalRecycle, etc.), and use SCS's experience from performing similar projects across the US to assess and quantify the impact of existing diversion programs (i.e., recycling, composting, etc.). This assessment will also identify opportunities and develop targeted recommendations for increasing diversion efforts across Nebraska.

Furthermore, SCS will use these results to estimate the total tons managed through disposal and through specific diversion strategies (i.e., recycling, composting, etc.). The data will be presented by material type, generator status (i.e., residential, commercial, etc.), and management strategy. Additionally, this assessment will also include an evaluation of potential environmental impacts (greenhouse gas emissions) that capturing the current and potentially recyclable and recoverable in the waste stream may have in Nebraska. This data assessment provides insights into identifying potentially recyclable and recoverable material in the current waste stream that will help inform future programs, services, education and outreach efforts, and infrastructure needs across Nebraska.

SCS staff have been servicing solid waste and environmental clients in Nebraska for over 20 years. SCS currently provides services to more than twenty solid waste facilities across Nebraska, of which, four are identified by the State as part of the eight preferred sort host facilities. In fact, in 2023 SCS

completed a comprehensive recycling and waste characterization project for the City of Lincoln and the Bluff Road Landfill which included similar activities desired for this Study. SCS staff have proudly served on and participated in state industry boards and associations and our proposed Project Director is the current Cornhusker Chapter SWANA President and just finished a 9-year run on the Keep Nebraska Beautiful Board in March of this year.

We have a proven track record for providing reliable and timely services and are committed to the State and the many interested stakeholders in successfully completing this project. SCS is prepared and excited to conduct the Study in a timely and organized fashion. If you have any questions concerning any aspect of this response, please contact Mike Miller or Jeff Phillips using the contact information below.

We acknowledge Addendum 1 (6/20/24) and Addendum 2 (6/25/24).

Sincerely,



Michael J. Miller, CHMM, MBA  
Senior Vice President  
**SCS ENGINEERS**  
[mmiller@scsengineers.com](mailto:mmiller@scsengineers.com)  
(402) 651-8194 (cell)



Jeff Phillips  
Project Manager  
**SCS ENGINEERS**  
[jdphillips@scsengineers.com](mailto:jdphillips@scsengineers.com)  
(515) 249-7554 (cell)

## 1 | CORPORATE OVERVIEW

As required, a completed “Request for Proposal for Contractual Services Form”, signed by DocuSign, is included in Appendix A. Additional required documents will be provided within 90-days upon receipt of Intent to Award as stated in the RFP. Completed Sections II thru IV – with proposed minor modifications is also included in Appendix A. We anticipate that the proposed modifications will be acceptable to the State, however we are fully prepared to work with the State to reach mutually agreeable terms and conditions should the proposed modifications not be acceptable.

The following provides answers to the information as requested in the RFP.

### BIDDER INFORMATION

<b>Company Name:</b>	Stearns, Conrad, and Schmidt Consulting Engineers, Inc. (dba SCS Engineers)
<b>Headquarters:</b>	3900 Kilroy Airport Way, Suite 110 Long Beach, California 90806
<b>Incorporated:</b>	1972 in the Commonwealth of Virginia
<b>Organization:</b>	S-Corporation (100% employee owned)
<b>Federal ID Number:</b>	54-0913440
<b>No. of Offices:</b>	70 (see <b>Figure 1</b> on next page for an office location map)
<b>No. of Employees:</b>	1,300
<b>Website:</b>	<a href="http://www.scsengineers.com">www.scsengineers.com</a>

**Figure 1: SCS Office Locations**



Our general services include waste and recycling material characterization studies, zero waste assessment and planning, organic material management program/facility design, sustainable materials management (SMM) facility and program planning, material management facility permitting, design and engineering, environmental compliance, landfill gas (LFG) and leachate/liquids management, organics management, professional training, and facility design/construction.

As one of the few large national companies specializing in solid waste management, we have established a leadership role in the industry. SCS personnel are influential in and leaders of industry and professional associations, through which they organize and participate in workshops and conferences, author and present technical papers, and conduct industry research. This breadth of industry experience is shared between our offices and used to continue to grow our staff professionally and to meet the project needs of our clients.

Beyond our solid waste engineering and planning services, sustainable service divisions of SCS have arisen to meet the challenges of our clients. These divisions allow SCS to efficiently meet the needs of clients throughout the nation with a diverse group of experts. As services are needed, national staff are contacted for assistance rather than attempting to staff a wide range of niche services out of each office.



## FINANCIAL STATEMENTS

SCS is one of the nation's leading providers of environmental solutions. SCS is financially strong, and we are committed to our continued financial health. Our capital structure and liquidity are sound, our Employee Stock Ownership Plan (ESOP) model provides for sustainability and our internal controls and business standards are designed to service our clients. We maintain a disciplined focus on risk management and operate the firm conservatively to minimize financial risks. Our current Dun and Bradstreet rating is 5A3, indicating sound financial strength. As of our December 31, 2023 financial audit, we had \$67 million of stockholder's equity which includes the \$7 million of net income from \$497 million of gross revenues for 2023. In addition, we have full availability of a \$40 million line of credit.

As an employee owned, non-publicly held firm, we have included in Appendix B, a banking reference letter as required by the RFP. Further, to fully demonstrate our stability, financial strength, and ability to serve the State with the services requested, we have also included, as requested, our most recent available consolidated financial statement and independent auditors' report (marked "Confidential" and uploaded as a separate proprietary document).

SCS has been in business for over 54 years. We have offices throughout the US. SCS stands behind its work. Occasionally, an organization with our scope and size has been involved in litigation. None of the matters has been or are material to our operations or limit in any way our ability to perform the work contemplated. If required, SCS will provide details for review on a confidential basis.

## CHANGE OF OWNERSHIP

No significant change of ownership or control of company operations is anticipated in the foreseeable future, but should such an event occur we would notify the State accordingly. As mentioned above, SCS is 100% employee-owned, and minor changes in shareholders or apportionment of shares occur annually.

## OFFICE LOCATION

**Project Office:** 14755 Grover Street  
Omaha, NE 68144

**Project Contacts:** Mr. Michael J. Miller, CHMM, MBA  
Senior Vice President / Project Director  
Phone: (402) 884-6202 or (402) 651-8194 (cell)  
[mmiller@scsengineers.com](mailto:mmiller@scsengineers.com)

Mr. Jeff Phillips  
Project Manager  
(515) 249-7554 (cell)  
[jdphillips@scsengineers.com](mailto:jdphillips@scsengineers.com)

## RELATIONSHIPS WITH THE STATE

SCS has previously worked for the Nebraska Department of Environmental Quality (NDEQ) and, in fact, completed the State's first major solid waste management planning effort in 1991 when SCS was the lead consultant who, in cooperation with the State Solid Waste Advisory Committee, prepared the Nebraska Solid Waste Management Plan. However, SCS declares that no contractual relationship with the State in the past three years has existed.



## BIDDER'S EMPLOYEE RELATIONS TO STATE

SCS declares that no party named in this proposal response is or was an employee of the State of Nebraska within the past 6 months. Current SCS employees do serve as appointees to various State of Nebraska environmental related boards (i.e. Governor's Council to Keep Nebraska Beautiful, Nebraska Board of Geologists) but these are appointments and voluntary roles only and do not result in an employment arrangement with the State.

## CONTRACT PERFORMANCE

SCS declares that no contract has been terminated for default during the past five years.

## SUMMARY OF BIDDER'S CORPORATE EXPERIENCE

SCS staff have been servicing solid waste and environmental clients in Nebraska for over 20 years. In fact, SCS staff have proudly served on and participated in state industry boards and associations. **Figure 2** below shows the general location of our solid waste management client locations within the past five years. This map shows the geographic range with which our solid waste management services are provided throughout Nebraska.

**Figure 2:** Past 5-Years SCS Solid Waste Management Client Locations



SCS has completed hundreds of waste and recycling audits for municipalities, communities, private entities, and states since the 1970s. The scope and complexity of material characterization studies have increased in recent years as communities look to significantly expand material diversion programs and apply characterization procedures to non-MSW materials streams such as source-separated recyclable materials and organics, material recovery facility residuals, and construction and demolition debris (C&D).

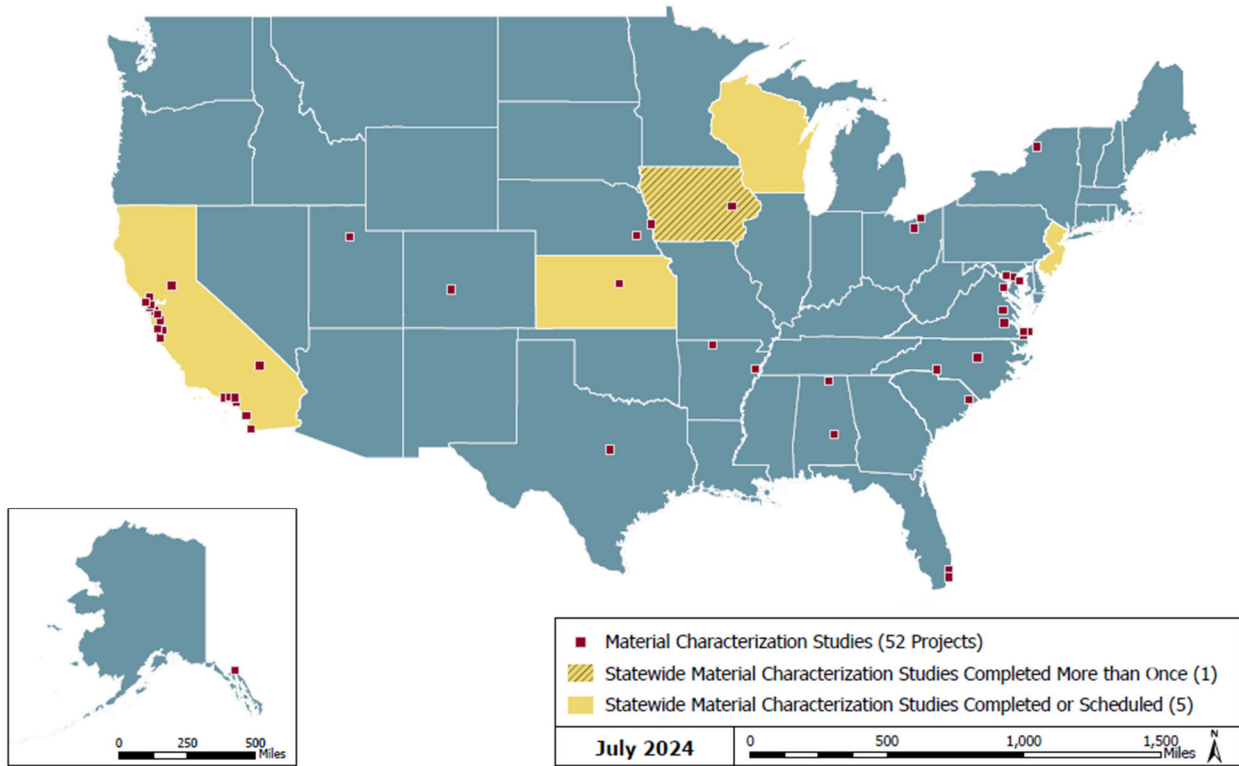
Several of our municipal clients ask us to repeat waste characterization studies at prescribed intervals (e.g., every five years) to compare disposal trends, measure recycling discards/capture rates, check compliance with bottle bills and green waste bans, explore opportunities to divert additional materials, identify homogeneous loads (e.g., textiles, lumber/pallets), and support solid waste management plan implementation.

Our waste characterization team, highlighted later in this RFP response, has extensive experience designing and implementing studies ranging from short one-to-two-day sorts to extensive multi-week,

multi-season, and multi-facility studies. In the past three years, we have conducted three statewide material characterization studies for Iowa, New Jersey, and Wisconsin. We have mobilized our professionals and a sorting crew to over 30 sites and manually sorted over 110 tons of waste. In the past five years, we have conducted more than 25 material characterization studies for jurisdictions across the US, mobilizing professionals and sorting crews to over 50 sites.

While SCS has been performing since the 1970s, **Figure 3** below shows the locations of characterization studies completed within the past 10-years or scheduled for completion.

**Figure 3:** Waste and Recycling Characterization Studies Within Past 10 Years



**Table 1** is a summary matrix which highlights select material characterization studies our team has completed to illustrate the variety and type of projects we have experienced. The table also provides summary information for projects related to the additional tasks identified in the RFP, which used material characterization results to identify and develop additional diversion programs and present environmental impacts of diverting materials from disposal. SCS was the prime contractor for all these projects. For additional information on each of these projects or if additional qualifications are needed, please contact SCS.

Appendix C provides narrative project descriptions for three selected projects. Appendix D provides letters of recommendation from clients which SCS has performed similar work to this project within the past five years.

**Table 1:** Summary Matrix of Similar Project Experience

Project Name	Client Contact	Scheduled and (Actual) Completion Year & Population	Scheduled and (Actual) Project Cost	Description of Work Performed by SCS Engineers	Key Personnel
<b>Nebraska</b>					
<b>Recycling and Waste Characterization Study</b> <b>City of Lincoln, NE</b>	<b>Donna Garden</b> Assistant Director - Utilities City of Lincoln - Transportation and Utilities 555 South 10 <sup>th</sup> Street, Suite 208 Lincoln, NE 68508 (402) 441-8605 dgarden@lincoln.ne.gov	2023 (Same)  Population 292,627	\$184,400 (Same)	<ul style="list-style-type: none"> <li>• Four separate sorting events</li> <li>• 330 samples from commercial and residential sectors</li> <li>• Physically characterized MSW from residential and ICI customers</li> <li>• Physically and visually characterized recyclables and contamination from collection locations and curbside program</li> <li>• Visually characterized Construction &amp; Demolition (C&amp;D), Bulky and Self-Hauled waste</li> <li>• Compared results to previous studies</li> <li>• Projected types of materials disposed and diverted</li> </ul>	M. Miller J. Phillips D. Tangeman H. Sperfslage
<b>Recycling Characterization Study</b> <b>City of Omaha, NE</b>	<b>Matt O'Connell</b> Recycling Coordinator City of Omaha 15600 S 10 <sup>th</sup> St Omaha, NE 68107 402-444-3915 ext. 1120 Matt.O'connell@cityofomaha.org	2023 (Same)  Population 485,153	\$16,000 (Same)	<ul style="list-style-type: none"> <li>• Two year annual services to supervise on-site audit of City's single-stream curbside collected recyclables</li> <li>• Reviewed audit protocols</li> <li>• Validated contractor data and reports</li> <li>• Facilitated planning meetings between City and contractor</li> </ul>	M. Miller D. Tangeman H. Sperfslage

Project Name	Client Contact	Scheduled and (Actual) Completion Year & Population	Scheduled and (Actual) Project Cost	Description of Work Performed by SCS Engineers	Key Personnel
<b>Open-Top Vehicle Characterization Study</b> <b>City of Lincoln, NE</b>	<b>Karla Welding</b> Manager City of Lincoln Solid Waste Management Division 5101 N 48 <sup>th</sup> Street Lincoln, NE 57404 (402) 441-7867 kwelding@lincoln.ne.gov	2019-2020 (Same)  Population 292,627	\$46,495 (Same)	<ul style="list-style-type: none"> <li>• Four season visual waste characterization study</li> <li>• Visually characterized 300 total samples of C&amp;D (75 per season)</li> <li>• Final report presented recommendations for additional diversion opportunities</li> </ul>	M. Miller C. Collier
<b>IOWA</b>					
<b>Statewide Material Characterization Study</b> <b>Iowa Department of Natural Resources</b>	<b>Tom Anderson</b> Executive Officer II Iowa Department of Natural Resources 6200 Park Ave Des Moines, IA 50321 515-240-6059 Tom.anderson@dnr.iowa.gov	2022 (Same)  Population 3.2 million	\$315,700 (\$337,700)	<ul style="list-style-type: none"> <li>• Ten weeks of fieldwork at ten different facilities</li> <li>• Physically characterized more than 500 samples from residential and ICI</li> <li>• Visually characterized more than 480 loads of C&amp;D</li> <li>• Presented project results at Iowa solid waste management conference</li> </ul>	J. Phillips H. Sperflage B. Dieleman M. Miller
<b>Environment and Economic Impact Analysis for Landfilled and Diverted Materials</b> <b>Iowa Department of Natural Resources</b>	<b>Tom Anderson</b> Executive Officer II Iowa Department of Natural Resources 6200 Park Ave Des Moines, IA 50321 515-240-6059 Tom.anderson@dnr.iowa.gov	2024 (Same)  Population 3.2 million	\$27,000 (Same)	<ul style="list-style-type: none"> <li>• Performed recoverability analysis on 2022 Statewide Material Characterization Study results</li> <li>• Performed GHG emissions assessment using EPA's WARM model</li> <li>• Performed potential revenue, economic, and job impact analysis</li> </ul>	J. Phillips H. Sperflage B. Dieleman

Project Name	Client Contact	Scheduled and (Actual) Completion Year & Population	Scheduled and (Actual) Project Cost	Description of Work Performed by SCS Engineers	Key Personnel
<b>Statewide Waste Recycling Facility Study</b> <b>Iowa Department of Natural Resources</b>	<b>Tom Anderson</b> Executive Officer II Iowa Department of Natural Resources 6200 Park Ave Des Moines, IA 50321 515-240-6059 Tom.anderson@dnr.iowa.gov	2024 (Same)  Population 3.2 million	\$48,500 (Same)	<ul style="list-style-type: none"> <li>• Surveyed more than 150 facility contacts</li> <li>• Achieved a survey response rate of more than 70%</li> <li>• Focused on traditional recyclable materials and textiles</li> <li>• Identified types of recycling facilities, tonnages recycled by material type, final processing destinations, contamination rates, revenues, and processing fees</li> <li>• Worked with State staff to develop interactive GIS map</li> </ul>	J. Phillips H. Sperfslage B. Dieleman
<b>Sustainable Materials Management Plan</b> <b>Iowa Department of Natural Resources</b>	<b>Tom Anderson</b> Executive Officer II Iowa Department of Natural Resources 6200 Park Ave Des Moines, IA 50321 515-240-6059 Tom.anderson@dnr.iowa.gov	2021 (On-going)  Population 3.2 million	\$328,250 (On-going)	<ul style="list-style-type: none"> <li>• Identified and recruited stakeholders and subcommittee member participants</li> <li>• Facilitated more than 30 strategic planning sessions for stakeholder and subcommittee members</li> <li>• Developed planning protocols and metrics to select material and action priorities</li> <li>• Researched and performed life cycle analyses on targeted materials</li> <li>• Developed recommendations with detailed action items and implementation timeline</li> <li>• Developed final report using engaging graphics and presented status reports at professional industry events</li> </ul>	M. Leonard C. Collier J. Phillips H. Sperfslage

Project Name	Client Contact	Scheduled and (Actual) Completion Year & Population	Scheduled and (Actual) Project Cost	Description of Work Performed by SCS Engineers	Key Personnel
<b>Donated Material Characterization Study Goodwill of the Heartland, Cedar Rapids, IA</b>	<b>Stacie Johnson</b> Sustainability Manager Goodwill of the Heartland 8200 6 <sup>th</sup> Street SW Cedar Rapids, IA 52404 866-466-7881 sjohnson@goodwillheartland.org	2023 (Same)  Population 136,429	\$10,000 (Same)	<ul style="list-style-type: none"> <li>• Conducted three days of sorting activities at centralized location</li> <li>• Physically characterized unsold donated materials from four separate Goodwill locations</li> <li>• Facilitated unsold furniture survey at the four locations</li> <li>• Developed recommendations focusing on internal processes and identification of markets for hard to divert materials</li> </ul>	J. Phillips H. Sperfslage
<b>WISCONSIN</b>					
<b>Statewide Material Characterization Study Wisconsin Department of Natural Resources</b>	<b>Casey Lamensky</b> Solid Waste Coordinator Wisconsin Department of Natural Resources PO Box 4001 Eau Claire, WI 54702 608-577-3643 Casey.lamensky@wisconsin.gov	2021 (2022 due to Covid)  Population 5.8 million	\$333,674 (\$335,674)	<ul style="list-style-type: none"> <li>• 9 weeks of fieldwork at 14 sites</li> <li>• 400 MSW samples distributed proportionately by region</li> <li>• 640 construction/demolition samples visually characterized</li> <li>• Sample at landfills as well as feeder transfer stations to get samples from direct-haul loads Compare current study with data from previous studies</li> </ul>	B. Dieleman S. Demers B. Powers

Project Name	Client Contact	Scheduled and (Actual) Completion Year & Population	Scheduled and (Actual) Project Cost	Description of Work Performed by SCS Engineers	Key Personnel
<b>KANSAS</b>					
<b>Waste and Recycling Characterization Study</b> City of Salina, KS	<b>Jim Kowach</b> Salina Department of Public Works 300 W. Ash St Salina, KS 67401 785-309-5725 jim.kowach@salina.org	2022 (Same)  Population 46,231	\$70,000 (Same)	<ul style="list-style-type: none"> <li>• 50 MSW physical sort samples</li> <li>• 25 MSW and CDD visual sort samples</li> <li>• 42 Material types</li> <li>• 25 Recyclable samples</li> <li>• 34 Material types</li> <li>• 2 Pre-consumer organic waste generator surveys</li> </ul> Currently performing data analysis and final report development.	R. Trenshaw J. Phillips H. Sperflage
<b>Waste Diversion Planning</b> City of Salina, KS	<b>Jim Kowach</b> Salina Department of Public Works 300 W. Ash St Salina, KS 67401 785-309-5725 jim.kowach@salina.org	2023 (Same)  Population 46,231	\$30,000 (2023)	<ul style="list-style-type: none"> <li>• Evaluated results of material characterization study to identify potential additional divertible materials</li> <li>• Assessed existing diversion programs</li> <li>• Facilitated strategic planning sessions with City staff, identified stakeholders, and the public</li> <li>• Identified and prioritized waste diversion initiatives</li> <li>• Evaluated potential diversion initiative impacts and implementation costs</li> <li>• Hosted open house and presented recommendations to the public</li> </ul>	R. Trenshaw J. Phillips H. Sperflage B. Dieleman

## SUMMARY OF BIDDER'S PROPOSED PERSONNEL/MANAGEMENT APPROACH

Understanding our clients, their organization, goals, and mission are critical to being successfully integrated as a trusted advisor on their team. We understand and appreciate that each project is unique and has various drivers and influencers depending on the scope, audience, and desired outcomes.

Due to the unique nature of each project, SCS does not have a “one-size fits all” methodology. That is why we approach our projects with an “Ears Wide Open” method. Meaning, we listen to and engage with our clients to determine from the onset the true drivers and desired outcomes for each project. It is by applying our expertise while maintaining close communications with our clients that we are able to develop innovative, sustainable, and cost-effective solutions that are responsive to our clients’ concerns. We propose similar initial meetings at the onset and throughout this project to solidify project objective, understanding, direction, responsibilities, schedule, and costs.

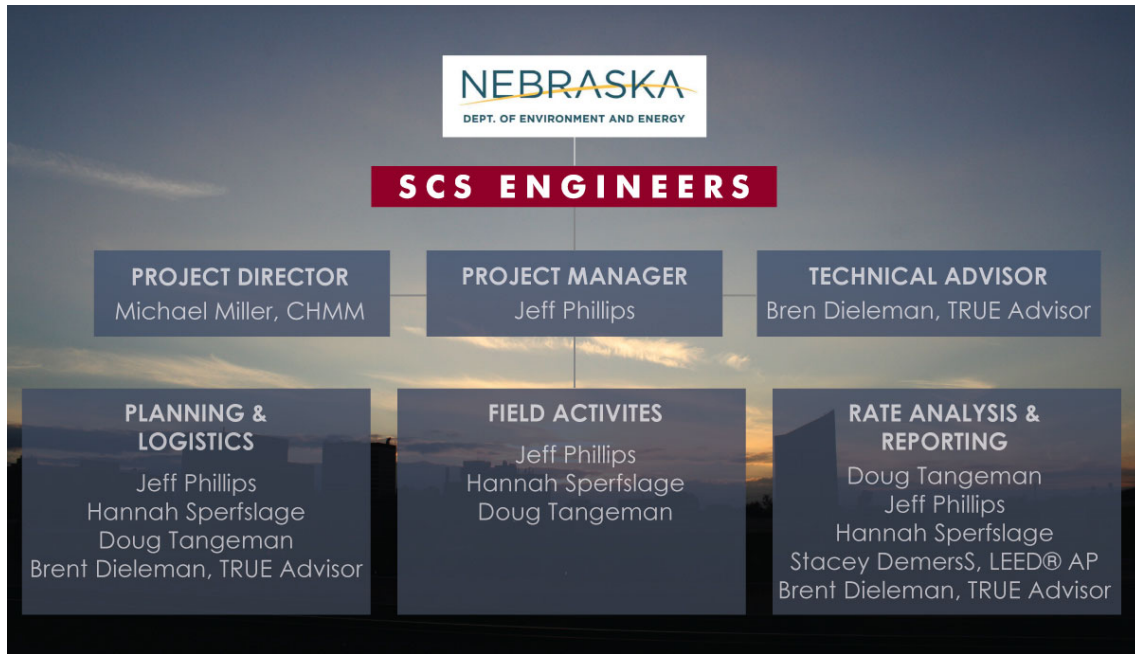
SCS has proposed a detailed work plan which is discussed later in this RFP response. The development of this proposed work plan was informed by the hundreds of similar projects SCS has successfully completed across the US.

## SCS PROJECT TEAM

SCS has assembled a project team that is well-experienced in performing material characterization studies as well as waste and diversion program evaluations and assessments. Below is an organizational chart showing the SCS staff and their assigned responsibilities for this project. Following the chart are brief experience bios of project personnel; full resumes are provided in Appendix E.



## ORGANIZATIONAL CHART



## KEY PERSONNEL BIOS

The following are short bios for SCS personnel who will be responsible for performing project activities. Full resumes are available in Appendix E.



### MICHAEL MILLER, CHMM, MBA | PROJECT DIRECTOR

Mr. Miller has a wide variety of experience in the environmental management and consulting field in both the private and federal sectors. Since joining SCS in 2005, Mike has supported many clients throughout the Midwest with integrated solid waste management programs including design, construction, operations, and planning.

As the SCS Omaha office manager, Mike will pledge the local resources of SCS and, as Senior Vice President of SCS, Mike has access to and will pledge the significant SCS resources outside of the local office, as needed, to successfully and efficiently complete the State’s project.

Mike provides 30 years of environmental and solid waste consulting experience and is familiar with the project execution requirements. Mike’s experience completing and supporting similar studies in the region will bring to the project a keen understanding of the planning process, importance and methods of communications between the State, host facilities, and SCS, local and state solid waste management knowledge, and understands the value of and how the

#### Education

MBA, Business Administration, University of Missouri, 2001

BS, Industrial Management, Arizona State University, 1994

#### Years of Experience

30

results of this Study may be used by the State and stakeholders across Nebraska.

This project will involve multiple layers, numerous stakeholders, multiple seasons, and a diverse range of potential challenges; effective communications and team accountability will be critical. Mike's passion and drive will create a successful partnership between SCS, the State, and host facilities.

Mike will serve as the Project Director for this effort. As Project Director, Mike will monitor project progress, provide technical guidance and review, and assist in successful project execution. Mike will also help develop and present project results.



### JEFF PHILLIPS | PROJECT MANAGER

#### Education

B.A., Geography and Environmental Studies,  
University of Iowa – Iowa City

#### Years of Experience

23

Mr. Phillips is a Project Manager who manages and performs project work primarily related to Sustainable Materials Management (SMM) such as program, services, and facility assessments, waste and recyclable material characterization studies, strategic planning, community engagement and outreach, and training. Jeff has managed and performed several physical and visual waste sorts in Iowa, Kansas, Missouri, and Nebraska.

Mr. Phillips has more than 23 years of experience in the Midwest overseeing solid waste management projects for municipalities, solid waste agencies, and both private and public entities.

Jeff will serve as the Project Manager for this project. Jeff's responsibility as Project Manager is to ensure that the scope is well laid out and understood and that there is clear communication between the State, host facilities, SCS staff, and project contractors and partners. Jeff will work to ensure project end goals and schedules are understood and followed, and budgets are met. Jeff will perform field activities to assist SCS staff and ensure that established work plan methodologies are being followed. Jeff will also assist with the recoverability analysis and developing recommendations for potential waste diversion opportunities. Jeff will also help develop and present project results.



#### Education

B.A., Environmental Studies: Biotic/Physical World, Dordt College

#### Years of Experience

20

### BRENT DIELEMAN, TRUE ADVISOR | TECHNICAL ADVISOR

Mr. Dieleman is a Project Manager in SCS's Sustainable Materials Management Division. He has designed, implemented, and executed over 40 waste characterization studies all over the world. These studies range from short one-day sorts at one specified site to complex multi-season, multi-site, and multi-material stream sorts over several weeks and months. Brent's portfolio of material characterization experience includes municipal solid waste, source-separated recyclable materials, source-separated organics, construction/demolition debris, bulky waste, and material recovery facility residuals. Brent also specializes in solid waste planning activities that often integrate the results and data obtained from material characterization studies into short- and long-term planning documents for clients. He works with communities across the country to develop program and policy solutions to meet material diversion and solid waste management goals.

Brent will serve as a Technical Advisor for the design, implementation, and analysis of this project. He will provide guidance on study design, sampling plan development, field procedures, and data analysis.



#### Education

B.S., Global Resource Systems and Environmental Studies, Minor in Biology, Iowa State University

#### Years of Experience

2

### HANNAH SPERFLAGE | LEAD FIELD MANAGER

Ms. Hannah Sperflage is a Staff Professional who assists and performs project work focused on Sustainable Materials Management (SMM). Hannah has assisted clients across the Midwest in evaluating their current solid waste management programs and services. She has two years of experience that includes performing and overseeing waste and recycling characterization studies, analyzing solid waste facilities, providing training materials, completing permit renewals, and performing comprehensive planning activities.

Hannah is passionate about engaging with clients to create a collaborative space to encourage waste diversion and better waste management practices. This includes holding stakeholder and community engagement sessions to present current operations, and communicate results and plans. Hannah has also performed various analyses on findings of material characterization studies for items such as economic, recoverability, and emissions evaluations to capture a holistic view of waste management practices. Hannah has been instrumental in leading field activities and performing characterization studies at more than thirteen facilities within the past year. Hannah has also helped review and develop the final characterization reports of these studies.

Hannah will coordinate, supervise, and perform field activities, support data analysis, perform recoverability analysis, and assist with developing recommendations for potential waste diversion opportunities. Hannah will also help develop and present project results.



## DOUG TANGEMAN | FIELD MANAGER

Mr. Tangeman has more than a dozen years' experience in the environmental field. His experience includes five years in the regulatory field as an Air Permitting engineer and compliance inspector for the Lincoln-Lancaster County (Nebraska) Health Department with his subsequent tenure as the lead air quality compliance consultant for SCS's Omaha office. Doug manages air quality compliance projects including Title V permitting and reporting, compliance evaluation, site investigation and monitoring, NSPS and NESHAP reporting, surface emissions monitoring, wellfield monitoring and balancing, and emission inventories.

Doug has led field activities, performed data quality review, and data analysis for several waste and recycling characterization studies in Nebraska. These results of these projects have helped clients identify program service improvements, identified additional diversion opportunities, and have helped client's realize program costs of more than \$1 million within the first 12-months of implementation of project recommendations,

Doug will coordinate, supervise, and perform field activities, support data analysis, and perform recoverability analysis, and assist with developing recommendations for potential waste diversion opportunities. Doug will also help develop and present project results.

### Education

B.S., Chemical Engineering,  
University of Nebraska

B.S., Biochemistry,  
University of Nebraska

### Years of Experience

12



## STACEY TYLER DEMERS, LEED AP | LEAD STATISTICIAN

Ms. Demers is a Leadership in Energy and Environmental Design Accredited Professional (LEED AP) with diverse experience in environmental program design and implementation. She has 30 years of experience in the solid waste industry and has worked on most of SCS's waste characterization studies conducted in the past 25 years.

With a B.S. in Statistics, she brings strong analytical skills as well as field program design experience to projects. She has directed many large waste composition studies that have characterized residential, commercial, and construction and demolition (C&D) waste sectors. She has also characterized segregated recyclables in both residential curbside collection programs and commercial and institutional recycling programs. More recently, she has evaluated materials in segregated organics programs, including contaminants. She works with municipalities and private industry on a variety of solid waste management planning elements related to the composition of targeted waste streams. Stacey has directed more than 10 waste characterization studies in the past five years.

Stacey will support data analysis activities for this project.

### Education

B.S., Statistics, Virginia  
Tech

### Years of Experience

30

## ADDITIONAL SCS PROJECT SUPPORT

SCS has over 1,300 employees across 70 offices nationwide, including regional offices in Omaha, Nebraska; Des Moines, Iowa; Overland Park and Wichita, Kansas; and Denver, Colorado. While we

are confident that our listed project team can successfully accomplish the objectives of this project, we can reach out to other staff members for project support if needed.

## SUBCONTRACTORS

SCS works with staffing agencies to assist with field efforts on waste characterization studies. We plan to use our national contract with People Ready and/or Express Employment Professionals working with their Nebraska offices, to provide five to six local staff for sorting efforts. We emphasize project safety as our number one priority, so we only contract with professional labor agencies that provide insurance to protect workers if there are work-related injuries. Our budgeting agreements with subcontractors are designed to pay all project support staff a living wage.

## PEOPLE READY OFFICES:

- 2906 S 24<sup>th</sup> Street, Omaha, NE (402) 345-1212
- 3243 Cornhusker Highway #2, Lincoln, NE (402) 475-0296

## EXPRESS EMPLOYMENT PROFESSIONALS' OFFICES:

- 6157 Center Street, Omaha, NE (402) 884-0122
- 4955 O Street, Suite C, Lincoln, NE (402) 420-5800
- 633 N Jeffers Street #1, North Platte, NE (308) 221-6330

Staff agency associates will work under the direction of experienced SCS staff performing sample collection and waste sorting activities. Each morning, SCS staff performs safety and project training which addresses how to safely, efficiently, and consistently perform project activities. Throughout the day, SCS staff perform quality evaluations to maintain desired project quality and consistency standards that SCS is projects are known for across the US.

It is proposed that staff agency associates will perform approximately 40% percent hours of the total estimated hours for this project.

## 2 | TECHNICAL APPROACH

Developing a sound approach and implementation plan to complete this Study is critical for laying the foundation for a successful project that provides statistically valid data for the State and the many interested stakeholders. Careful planning must go into identifying and screening waste streams, completing field activities, and analyzing data. This section provides our anticipated technical approach and implementation plan to complete this Study. This plan may be modified based on feedback from the State and the host facilities during project pre-planning activities.

### UNDERSTANDING OF THE PROJECT REQUIREMENTS

SCS understands that the State desires to perform a Study that includes eight solid waste management facilities in Nebraska and uses methods that allow the results to be compared to the 2009 Study. We understand the State and other waste and recycling stakeholders throughout the State need to have relevant and reliable data for measuring diversion program success and identifying opportunities to expand diversion efforts.

SCS will develop a work plan tailored to each of the eight selected solid waste management facilities, so the results are representative of the types and quantities of MSW and C&D materials disposed of at that facility for the year. The combined data from the eight facilities will establish a representation of the types and quantities of MSW and C&D materials that are disposed of across the state during the year, as well as within each of the four seasons.

SCS understands the project's deliverable for quantifying the tonnages and environmental impact of existing recycling and diversion programs. This information, along with the results of the Study, will be used by SCS to develop targeted recommendations for increasing diversion opportunities across Nebraska.

SCS will develop a final report which presents the methods used and the results of this project. Additionally, SCS understands the State's desire to have the results of this project presented at a professional solid waste management conference.

SCS understands that the State desires that first seasonal characterization sort begin in the winter of 2025 and the fourth seasonal characterization sort be completed in the fall of 2025. The final report, presenting results of all project activities will be completed before June 2026 and the presentation of project results at a professional solid waste management conference will be completed before September 2026 (term of contract is stated as two years after execution of project contract between SCS and the State).

### PROPOSED DEVELOPMENT APPROACH

SCS values close communication with clients from start to finish of a project. To present and discuss details of the project approach, SCS proposes facilitating an initial project kick-off meeting with the State. This meeting will help to clarify project expectations, establish lines of communication, and refine the project approach and schedule. SCS will take responsibility for preparing a meeting agenda and meeting notes. Additional project update meetings would occur with the State throughout the Study. A detailed description of our proposed approach and work plan is described later in RFP this response.

### TECHNICAL CONSIDERATIONS

As a supplement to the technical skills and experience of our project team demonstrated previously in this RFP response, this section is intended to provide additional information about SCS's culture and accomplishments over our 50+ year history in the solid waste industry. We hope this information

provides further substantiation regarding SCS's reputation and qualifications, allowing us the opportunity to earn your business with the hope of building a long and beneficial working relationship for years to come.

In the end, the only recognition worth celebrating is that of a satisfied client; to that end we have included information below listing the numerous awards and recognitions earned with and for clients in recent years. We are confident that our culture, qualifications, and superior client service in conjunction with this statement of qualifications will provide validation that SCS has the ability to support the State on this important project.

## A CULTURE OF SUPERIOR CLIENT SERVICE

Client satisfaction is a cornerstone of SCS culture. From our project manager training to our corporate strategic planning, SCS is constantly seeking ways to improve our understanding of client needs and requirements, thus enabling us to consistently meet or exceed client goals and expectations. One of our Mission statements is to "Adopt our clients' environmental challenges as our own." This culture results in a sense of ownership and pride tied to our service and solutions. Our Superior Client Service is demonstrated at all levels of SCS, through our ability to create cost-effective solutions to a client's environmental concerns, our development of value-added client-centered technology solutions, and always delivering what we promise. We aspire to be a leading authority for practical solutions.

More importantly, our clients assess our performance each year through an active solicitation by our company Chief Executive Officer – Mr. Doug Doerr, P.E. We consistently are ranked well by our clients and while these survey results are helpful, the best demonstration of our performance is the high percentage of clients that repeatedly give us the privilege to assist them; including numerous Nebraska municipalities such as Alliance, Gering, Grand Island, Lincoln, and Omaha; numerous private waste clients such as Waste Connections of Nebraska and Waste Management of Nebraska; and many more Nebraska companies and organizations alike who routinely manage environmental and solid waste matters including Metropolitan Utilities District, Omaha Public Power District, Lincoln Electric Systems, and others.

## NATIONAL AND LOCAL LEADERSHIP

Over the course of the past five decades, SCS has developed a reputation of excellence in the field of solid waste management, partly by the active contribution to the industry through trade association participation, and publication and presentation of technical papers. Currently, SCS holds elected leadership positions in the following national level industry or trade associations:

- Solid Waste Association of North America (SWANA) Landfill Division
- SWANA Landfill Gas Division
- National Solid Waste Management Association (NSWMA) Waste Industry Coalition
- NSWMA Landfill Institute
- NSWMA Environmental Research and Education Foundation (EREF)
- SWANA Applied Research Foundation (ARF)

SCS upholds an 'open book' philosophy regarding our industry achievements – our expertise is made readily available through our publications, presentations and industry involvement for the benefit of our clients. To date, SCS personnel have published over 500 papers related to landfill and solid waste issues. An ongoing database of published papers is maintained for client use (see <http://www.scsengineers.com/publications/> for a full listing of SCS articles and publications).

## RECENT AWARDS AND INDUSTRY RECOGNITION

Since 1997, a significant number of SCS projects have been recognized for technical excellence by SWANA. Conducted annually, this competitive program is intended to recognize the top operating waste collection, transfer stations, and landfills in North America based on design, management, and environmental protection.

Both SCS as a firm and the professional staff at SCS have received industry recognition and awards through SWANA, NSWMA, the U.S. EPA's Landfill Methane Outreach Program (LMOP), the American Society of Civil Engineers (ASCE), and the National Society of Professional Engineers for research achievements and technology innovations in solid waste management.

## DETAILED PROJECT WORK PLAN

SCS will work closely with the State to develop a work plan that successfully accomplishes the objectives of this project. The information presented in this section demonstrates that SCS has the required personnel, expertise, and availability to characterize the waste generated and disposed by the residential and industrial, commercial, and institutional (ICI) sectors in Nebraska, including visual C&D characterization, as well as experience to perform the associated assessments and evaluations to develop recommendations for increased waste diversion opportunities. This submittal presents our work plan, which addresses the scope of work requirements listed in the RFP and our qualifications in waste characterization services. Our cost proposal is submitted separately as required by the RFP.

SCS will work with the State to develop an industry-accepted method to obtain data critical to the Study that includes a customized sampling plan that results in data most useful to the State and Nebraskans.

## REVIEW PREVIOUS 2009 AND DEVELOP 2024 SORT METHODOLOGY

Establishing methodologies for this Study such that collected data can be easily compared to the previous 2009 Study will be an important part of the initial steps of this project. SCS has reviewed the previous practices and has proposed methodologies in this RFP response. These methodologies address overall statewide methodologies as well as the specific methods/procedures to be used at the individual host facilities.

- **Host Facilities** – SCS understands the 2009 facilities serving as host facilities for this Study is preferable for comparison to historical data. The variety of large urban, small urban, large rural, and small rural capture virtually all aspects of waste disposal throughout the state. These eight facilities are ideal candidates for this Study and SCS will utilize current industry relationships to influence participation from these facilities.
- **Generating Sectors** – The 2009 Study obtained data from residential, ICI (includes institutional and industrial) generating sectors. In addition to these generating sectors, C&D will be visually characterized. SCS understands the comparability of these generating sectors and will work with each host facility to determine the sampling plan based on the waste received.
- **Bulky Item Documentation** – The documentation of bulky items (i.e., mattresses, furniture, etc.) within a sample pile was performed in 2009 to capture the materials that would not otherwise be hand-sorted. SCS will execute this documentation process to visually characterize items before a sample is taken to be physically sorted.
- **Data Measurement** – To accurately analyze the waste composition of the state's disposal, weight and volume measurements will be taken. Each sample will be weighed before the sort process and after to ensure consistency. As performed in 2009,



material components will be weighed, and volumes will be documented based on number of containers and no-weight materials.

## KICK-OFF MEETING

Shortly after receipt of the notice to proceed, a project kick-off meeting will be planned to discuss the parameters of the project, the schedule, data needs, and communication protocols between the State and SCS. The meeting will be divided into two parts, the first addressing administrative project tasks, and the second being a project planning session.

### Meeting Part 1 - Administrative

- Project schedule
- Communications plan
- Project status report schedule
- SCS Client Feedback Surveys
- Identify potential stakeholders and discuss desired levels of project engagement



### Meeting Part 2 – Project Planning

- Review and discuss available data pertaining to current ISWM programs, services, and facilities across Nebraska
- Identify potential data gaps and request relevant data
- Discuss local, state, and regional ISWM programs, policies, facilities, and/or plans which may impact Nebraska
- Review and discuss desired project attributes of host facilities, and proposed methods for host facility communication and project selection
- Review and discuss material components and project methodologies from the 2009 Study proposed for this Study. This includes a review and discussion of proposed methods for material generation and final management (i.e., disposal, diversion, etc.) estimates and environmental impact analysis

SCS anticipates that this meeting will be an open discussion with significant information exchange between the SCS Team and the State staff. It is envisioned that the SCS Team will discuss how similar studies have been conducted and give insight into factors that influence and affect successful results. The results of this meeting will help inform and focus project tasks.

## PRE-SORT PLANNING MEETINGS

SCS understands that implementing this Study requires the cooperation and coordination of many stakeholders across the State. To aid this dialogue, SCS will facilitate virtual Pre-Sort Workshops with each host facility. The Pre-Sort Workshops will include State representatives, host site staff, key members of SCS's project team, and other stakeholders the State wishes to invite. We will prepare and deliver a presentation for each facility that will provide the waste sort approach, project roles/responsibilities/expectations, and schedule/timeline for the completion of project tasks. The Pre-Sort Workshops will also provide an opportunity for all project participants to ask questions and clarify operational protocols.

## PROJECT MEETINGS

While regular project communication will occur between SCS, the State, and host facilities, we propose scheduling monthly project meetings to provide updates on project progress, review and discuss preliminary results, discuss project schedule and upcoming sort activities, and to affirm project objectives are being met. These meetings will be virtual. SCS will prepare an agenda in advance of the meetings and provide summary notes within two business days of the project meeting. Additional project meetings can be scheduled as necessary and will likely occur as data is being presented for review and discussion.

## HOST FACILITY SELECTION

SCS will work with the State as well as interested host facilities to ultimately select up to eight unique solid waste management facilities (i.e., landfill and/or transfer stations). These facilities will represent large urban, small urban, large rural or small rural Nebraska communities. SCS understands that facilities serving as host sites for the 2009 Study provide a reasonably representative cross-section of disposed waste generated in Nebraska. These characteristics coupled with their familiarity with protocols and requirements make these sites ideal targets again for this Study.

SCS will administer an information request from the previous host facilities to evaluate the capabilities of these sites for participation in this Study. The information request may include the following:

- Equipment availabilities (i.e., loader, dumpsters, enclosed facility, etc.)
- Available staff (i.e. dedicated staff member to assist in sampling and disposal of post-sorted materials)
- Willingness to participate

Although the 2009 host facilities are preferred participants for this Study, if previous participants are unwilling or do not meet current requirements to enable safe and efficient sort procedures, SCS will work with State staff to identify alternative host facilities.

To screen potential host facilities, SCS will work with the State to select up to ten (10) facilities to receive a questionnaire. The questionnaire seeks to obtain operational data about the facility which will be helpful in developing a unique work plan for each host facility. Data requested may include, but is not limited to, the following:

- Operating hours of the facility;
- Annual quantity of in-state generated waste received;
- Quantities and types of in-state waste generated by the following sectors: residential, institutional/commercial/industrial, mixed waste customers, and C&D;
- Quantities of in-state generated waste delivered to facility by hauler name;
- Delivery method for residential, ICI, and C&D waste and whether materials are received separately or mixed at the facility;
- Portion and type of waste received at the facility that arrives in transfer trailers;
- Access to loader equipment and operators to help manage samples;
- Map/schematic of host facility.

Based on the data provided, SCS will put forward a list of ten (10) potential host facilities for the State to review and approve for participation in this project. Preference for selection will be given to facilities which participated in the 2009 Study. Should the State reject two or more of the proposed

host facilities, SCS will provide the names of additional potential host facilities for review and approval by the State. Once the State has approved the list of eight (8) host facilities, we will contact the facility to formally invite participation in the Study. If a facility declines our invitation to be a host facility or cannot meet our support requirements, SCS will identify another facility using the criteria above for the State's approval.

## SAMPLING PLAN DEVELOPMENT

Prior to beginning fieldwork, SCS anticipates administering a data request to develop a detailed sampling plan for the overall sampling plan and one tailored to each host facility. The information below details the methodology of developing a customized sampling plan.

- **Comparability.** The purpose of this Study is to compare findings to the 2009 Study and create a methodology that is repeatable for future comparisons. SCS will develop a sampling plan similar to the 2009 Study by generating sectors and quantities of materials to determine a stratified sampling plan.
- **Material Generating Sectors.** Residential and ICI-generating sectors will be sampled and physically sorted for this Study. Additionally, SCS will perform visual characterization of C&D waste streams at each of the host facilities. Sampling and characterizing in this manner help to develop a comprehensive representation of the overall waste stream disposed in Nebraska. The three proposed generating sectors are defined below:
  - **Residential** – Waste generated in single-family and typically up to 4-plex unit residential households; this waste material is typically collected by public or private haulers in compacting rear-load and side-load collection trucks.
  - **Industrial/Commercial/Institutional (ICI)** – Waste disposed of by multi-family apartment complexes (greater than 4-plex units), businesses, institutions, and industrial facilities; waste from these generating sectors is typically collected by private haulers in commercial containers using front or rear-loader compacting trucks.
  - **Construction and Demolition Debris (C&D)** – Waste generated during construction and/or demolition activities. This waste is typically collected in open-top roll-off boxes and containers that have been stationed at construction sites.
- **Mixed Waste.** SCS understands mixed waste was a small generating sector in the 2009 Study. Diversion programs tend to not affect the mixed waste generating sector, therefore mixed waste is typically not sampled as part of characterization studies. SCS does recognize the comparability between the 2009 Study to the current Study and on occasions where pure loads of a single generating sector cannot be obtained, SCS will prioritize sampling and sorting from vehicles that contain a majority (>75 percent) of one particular type of waste that is separated in the truck. When the availability of pure or majority pure samples cannot be obtained, SCS will resort to sorting mixed waste loads. SCS anticipates that the data from mixed waste loads will be used to calculate the overall statewide waste composition but will not be used to develop waste profiles for the individual generating sectors.
- **Material Categories.** The 2009 Study consisted of a total of 90 material categories (40 material categories for the physical characterization and 50 material categories for the visual characterization of the physically sampled load) that provided a picture of the waste stream. Prior to beginning fieldwork, we anticipate reviewing each material category and their description with the State to confirm a mutual understanding of how materials are to be

classified and compared to 2009 material categories. This is particularly important given continual changes in product packaging that brings new materials into the waste stream. SCS will work with the State to finalize both a material category list for MSW and C&D prior to fieldwork.

- **Further Separation of Categories.** There may be an instance where the State sees a benefit in further separating material categories. For instance, PET #1 and HDPE #2 were the only numbered plastics examined separately. PP #5 has the third largest market value after HDPE #2 and PET #1. If the State were to separate PP #5 from the “Other Numbered Containers” material category from the 2009 Study, this can be easily compared to the previous study by combining PP #5 to the other numbered containers.
- **Overall Sampling Plan.** SCS will develop an overall sampling plan for the Study that will identify the total number of waste samples to obtain at each facility based on the quantities of material disposed of by facility.
  - **Individual Sampling Plans.** For each of the host facilities, we will develop a sampling plan specific to that facility based on waste types and quantities received. The proportion of residential and ICI samples will be proportional to the quantities of each waste stream disposed. For example, if 60 percent of the MSW disposed at a host facility is from the residential generating sector, then 60 percent of the waste samples sorted at that facility will be from the residential generating sector. The remaining 40 percent of waste samples would be from the ICI sector. Furthermore, SCS proposes working with the host facility to identify haulers by waste category (i.e., residential, ICI, C&D) and quantities delivered for disposal so that selected samples are also representative of the haulers that deliver waste to the facility. If residential or ICI waste quantity data is unavailable, SCS will request the host facilities to estimate the breakdown in quantities. If an estimate cannot be made, SCS will sort the same number of residential and ICI samples at that facility. Each sampling plan will list the number of samples to obtain from each generating sector for the duration of the field activity. SCS will aim to sort 10 samples of waste per day; however, the number of samples obtained and sorted at each host facility will vary and depend on their overall waste receipts.

SCS anticipates sampling and sorting a total of 610 MSW samples for this Study. The number of residential and ICI samples will be proportional to the quantity of waste disposed by these two generating sectors. In addition, SCS will characterize up to 400 samples of C&D waste. SCS anticipates characterizing up to a total of 1,010 samples as part of this Study which is an increase from the previously sampled 624 in 2009. The following table summarizes the proposed total number of samples characterized per season for this Study.

**Table 2:** Summary of Proposed Total Number of Samples Characterized for All Seasons

Waste Stream	All Four Seasons		
	Number of Sort Days	Samples Per Day	Total Number of Samples
MSW (residential and ICI)	61	10	610
C&D	40	10	400
<b>TOTAL</b>			<b>1,010</b>

We anticipate SCS's sort crews will be in the field sampling and characterizing waste samples for approximately 15 days per season and a total of 61 days for the entire Study. Field activities at each host facility will be scheduled for "typical" waste disposal conditions. We will work with individual host facilities to identify days or weeks when field activities should be avoided due to events such as the Nebraska state fair, county fairs, and holidays.

SCS proposes physically sorting 610 MSW samples over the four-season schedule. The number of sampling events is displayed below in Table 3. It is anticipated that data received from host facilities will enable the classification into the following categories:

- Large Urban
- Small Urban
- Large Rural
- Small Rural

Based on the received host facility data, there will be a classification of each facility into those categories. **Table 3** (next page) displays the proposed number of sampling events per season which indicates the number of times a sort crew is sent to characterize MSW and C&D material. SCS has evaluated submitted tonnage data from a variety of permitted landfills and transfer stations to determine large urban and small urban facilities hold the largest percentage of total tons disposed within Nebraska, therefore the largest number of samples are examined from these classifications.

SCS has right sized the project scope to the available project budget stated by the State in Addendum #1 and #2. It is recognized that the sampling events per season differ from the 2009 Study, however this change still allows for comparability across studies. Additionally, the number of samples characterized will be increased from 624 samples in the 2009 Study to 1,010 samples.

It is anticipated that the most waste disposed occurs during the summer months, indicating the largest number of sampling events by each facility classification should occur during this season. Conversely, the contrast between winter and summer typically provides the largest variance in materials found in the waste stream and tons disposed of, therefore winter has the second largest number of sampling events.

**Table 3:** Summary of Anticipated Sampling Events Per Season

Facility Classification	Sample Events at Unique Facilities Per Season				TOTAL
	Winter	Spring	Summer	Fall	
Large Urban	2	2	2	2	<b>8</b>
Small Urban	2	1	2	1	<b>6</b>
Large Rural	1	1	1	1	<b>4</b>
Small Rural	0	0	1	0	<b>1</b>
<b>TOTAL</b>	<b>5</b>	<b>4</b>	<b>6</b>	<b>4</b>	

If additional project budget is made available, SCS will work with the State and host facilities to coordinate additional sorting events and days.

## CONDUCT WASTE SORTS

SCS will provide two experienced SCS field supervisors (Sampling and C&D Characterization Manager and Sorting Manager) and a subcontractor sort crew of up to six individuals to staff all field activities required to complete this project. The SCS professionals will be responsible for following the established methodologies and coordinating with host facility staff, contracted laborers, and any local volunteers. The roles of these positions are listed below.

- **Field Staffing.** SCS anticipates staffing the field activities for this project as follows:
  - **SCS Sampling and C&D Characterization Manager** – Experienced SCS professional will oversee and complete all tasks and functions related to identifying, screening, obtaining MSW samples to be manually sorted and visually characterizing C&D waste samples.
  - **SCS Sorting Manager** – Experienced SCS professional will oversee the waste sorting activities. This includes weighing MSW samples and management of subcontractor associates hired to sort materials, quality control of sorting activities, and weighing and recording of data.
  - **Subcontractor Sort Team** – SCS works with staffing agencies to assist with field efforts on waste characterization studies. We plan to use our national contract with People Ready and/or Express Employment to work with their Nebraska offices, to provide five to six local staff for sorting efforts.

## SAMPLING METHOD – MSW

Consistent with the 2009 Study, the “grab sample method” will be utilized for obtaining MSW samples, which is where samples of waste are randomly obtained from collection vehicles as they enter a solid waste facility. Consistent with ASTM D5231-92 (2024) Standard Test Method for the Determination of the Composition of Unprocessed Municipal Solid Waste, each sample of waste will weigh between 200 to 220 pounds. Our sampling procedure consists of the following steps, aimed at targeting random and representative samples of waste:

- **Truck Selection** – The SCS Sampling Manager will use the individual facility sampling plan and work with host facility staff as needed to identify trucks delivering waste to the facility. We will obtain specific truck numbers and approximate delivery times to track samples and confirm the proper number of samples are obtained and sorted at each facility.

- **Driver Interview** – When a truck carrying waste for potential sampling arrives at the facility, the SCS Sampling Manager will briefly interview the driver (in a safe location) to confirm the generating sector where the waste in the truck originated. If there is doubt about the origin of the waste or if it is carrying waste that originated from out-of-state, it will not be sampled. If the waste in the truck is deemed appropriate for sampling, the SCS Sampling Manager will direct the driver to offload the waste in a pre-arranged location.
- **Sample Screening** – Once the waste has been discharged from the collection vehicle, the SCS Sampling Manager will inspect the sample by walking around the pile. If the materials discharged are unusual or inconsistent with our expectations of what the sample should look like, the sample will be discarded and another sample will be obtained. It is the SCS Sampling Manager's sole discretion as to whether a sample is representative and should be obtained for sorting.
- **Data Recording** – Once a truckload of waste has been deemed appropriate for sampling, details of the sample, including hauling company, generating sector, day/time of delivery, weather conditions, truck type, and other information will be recorded on a sample record. A visual documentation of bulky items within the pile will also be noted on the sample sheet. Photos of each side of the pile to be sampled will be captured for visual references. Each sample will have its own sample record for recording details and weights specific to that sample.
- **Sample Acquisition** – Once the sample has been inspected and selected for sorting, it will be visually divided into six equally sized segments. A random number generator table (1 through 6) will be used to select the location in the pile to sample. The SCS Sampling Manager will request a host facility heavy equipment operator to scoop up a sample of materials. Sample acquisition will be done in a way that does not alter the apparent composition of the material. The SCS Sampling Manager will coordinate with host facility staff to keep the sampling area clear of excess materials not part of the sample.
- **Sample Transport** – The heavy equipment operator will transport the sample to the sorting location and place it in large garbage containers for subsequent weighing. Excess sample material (i.e., waste leftover from collecting 200 – 220 pounds at the sorting location) will be transported back to the working face by the heavy equipment operator for disposal.

## CHARACTERIZATION METHOD – MSW

SCS will establish a sample selection protocol that is consistent with the ASTM Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste, Designation D5231-92 (2024). Our sampling procedure aims to target random and representative samples of waste and will be the same for the duration of the entire Study.

- **Step 1** – A sample of waste is transferred from containers to a sort table and photographed; large or heavy items, such as wood panels or bulky waste, are placed directly into the appropriate container for subsequent weighing.
- **Step 2** – Plastic bags containing materials are opened and contents are manually sorted according to the agreed-upon list of materials; separated materials are placed in a unique container and this process continues until the sample has been completely sorted; the SCS Sorting Manager will oversee operations and provide continual quality control of the sorted waste categories.
- **Step 3** – Sorting of materials continues until the sample has been characterized down to small indistinguishable particle size of 2-inches or less; a photograph of these materials is taken, and materials are removed from the sort table and placed in a separate container for weighing as “fines.”

- **Step 4** – Containers with the sorted materials are individually weighed by the SCS Sorting Manager who also performs additional quality control measures to confirm the purity of each sorted material category and document the number of containers per material category; tare weights of the empty containers and containers with the sorted materials are recorded on a sample data sheet which is unique for every sample; measurements are made to the nearest tenth of a pound. During this step, the volume consumed by the material in the container will be recorded. SCS will use consistent containers for the materials that have known volumes. Additionally, SCS will count and document the number of plastic, glass, and metal beverage containers identified in each sample. Only ten States in the US currently have bottle bills for a variety of beverage container types. The closest state to Nebraska that has a bottle bill is Iowa. If the State desires, SCS will additionally sort, count, and document the number of these containers found in the sample into deposit and non-deposit containers.
- **Step 5** – Upon completion of weighing sorted materials and recording the data for each sample, the materials are placed in a container for disposal; we anticipate host facilities to provide containers for the disposal of trash.

## SAMPLING METHOD – C&D

The SCS C&D Characterization Manager will complete the sampling method for C&D samples. Similar to our approach for MSW, we will target random and representative samples of C&D. The selection and screening of C&D samples will be the same as described above for MSW. This includes selecting collection vehicles, interviewing drivers, screening waste materials, and recording sample data. Since SCS will visually characterize the entire load of C&D, we do not anticipate transporting C&D waste to another location for characterization. Visual characterization of C&D loads will occur at or near the disposal location (i.e., landfill working face) at each facility.

**Characterization Method – C&D.** C&D characterization will be completed by the SCS C&D Characterization Manager. Once the entire waste load has been offloaded, an experienced SCS professional will make a systematic observation of the major material components of the load. SCS staff will request the total weight of the delivered C&D materials from the load selected for sampling. The basic steps of the visual characterization method are as follows:

- **Step 1** – As described above, the screening protocol for truck selection, driver interviews, visual inspection, and data recording will be completed for each load of C&D visually characterized to confirm only representative waste samples are obtained.
- **Step 2** – For selected and screened loads, SCS staff will work with host facility staff to record the weight of material delivered for each load.
- **Step 3** – The load will be tipped in a designated location and, if necessary, SCS personnel will work with the host facility to request a loader operator to spread the contents of the load. However, typically the waste vehicle driver can tip the load in a manner such that a visual characterization of C&D waste can be adequately performed without needing to spread the pile out. At this step, SCS will photograph the sample.
- **Step 4** – The SCS C&D Characterization Manager will observe the entire load of materials, note the major material components in the load, and estimate the percent of the load that comprises each major material type.
- **Step 5** – The SCS C&D Characterization Manager will make a second pass around the entire load, note the secondary (smaller quantity) material components in the load, and estimate the percentage of the load that comprises each material type.
- **Step 6** – All data will be recorded on a data collection form unique to each C&D sample visually characterized. SCS personnel will confirm that the sum of the estimated percentages equals 100.



**Field Activities Workspace Clean-Up.** At the end of each workday, the project team will clean the work area and secure/store all field equipment and supplies until the following morning. Upon completion of all field activities at each host facility, the project team will clean the work area and remove all project supplies. SCS personnel will contact a representative of the host facility to let them know the work activities have concluded for the day and allow them to inspect the cleanliness of the work area if desired.

## DATA MANAGEMENT AND ANALYSIS

SCS follows a rigid protocol for collecting, recording, safeguarding, and analyzing data for waste characterization studies. Our Sorting Manager will record all data on a sample data sheet during field activities. Each sample of waste obtained and sorted for this project will have a unique sample data sheet where all details and weights pertaining to the sample are recorded. Data recorded on each sheet will be reviewed for completeness and converted to an electronic file and saved on SCS's secured network at the end of each day.

Only SCS personnel will handle the waste sample records with the recorded data. These forms are safeguarded with extreme care while in the field. At the end of each day, waste sample records generated that day are converted to an electronic format and saved on SCS's secure network. This, coupled with photos of each form, provides important backups for the hard-copy waste sample records.

The SCS Sorting Manager and the SCS Sampling and C&D Characterization Manager will record all data on a sample data sheet during field activities. Each sample of waste obtained and sorted for this project will have a unique sample data sheet where all details and weights pertaining to the sample are recorded. Data recorded on each sheet will be reviewed for completeness at the end of each day.

Data from the sample sheets will be transcribed to a database that will be set up specifically for this project. The raw data will be recorded, and standard statistical analysis will be completed for each waste component category. We believe that recording data on sample data sheets and transcribing it in a spreadsheet allows for additional review and quality control of the data.

SCS will conduct standard statistical analysis on all data recorded using formulas to track data and allow multiple SCS professionals to review and verify the data for accuracy. The analysis will include the following calculations:

- **Percent Composition.** Convert the actual weights of each material for each sample (after subtracting container weight) to a percent composition based on the total weight of the sample.
- **Aggregation of Sample Data by Generating Sector.** Aggregate all sample data by each generating sector: residential, ICI, and C&D. This will be done for each host facility; data from all host facilities will be aggregated to develop a statewide waste composition profile (based on the material category list) for each generating sector.
- **Standard Deviation.** Standard deviation for all materials in each composition profile will be calculated to measure how spread out the values in a group are from the average.
- **Confidence Intervals.** Calculate 90 percent confidence intervals for all MSW materials for each generator waste composition profile and the visually characterized C&D materials.

## DELIVERABLES AND DUE DATES

### Materials Managed via Diversion Programs

Material characterization studies help solid waste planners better understand what is in the disposed waste streams and from which generating sector (i.e., residential, ICI, etc.). This data informs policies, regulations, material management fees, education initiatives, and new or expanded diversion initiatives. However, these studies only account for materials that are managed at disposal facilities and do not represent the amount or type of materials that are being generated for management.

SCS will work with the State to develop methodologies to estimate the amount and type of material that is currently being captured for waste diversion through recycling, composting, and other management pathways (i.e., donation, etc.). The methodologies will be influenced by information from state organizations (i.e., Nebraska Recycling Council, Nebraska SWANA Cornhusker Chapter, etc.), material management companies (i.e., recycling processing facilities, collection and hauling companies, etc.), industry waste and recycling generating data sources (i.e., US EPA, CalRecycle, etc.), and SCS's experience performing similar projects across the US. The resulting methodologies will be designed such that they can be replicated for future similar efforts.

The results of these efforts will present the total estimated tons of MSW and C&D that are:

- Collected, recycled, composted, or managed through other pathways by material type and generator source.

This information, combined with the results of the Study will be used to develop targeted recommendations that seek to increase diversion opportunities across Nebraska. Recommendations may include changes to state and local policies, programs, and education campaigns that promote reuse and diversion markets.

### Greenhouse Gas Emissions Reductions

Based on the results of the evaluated material diversion assessment, SCS will perform an analysis of the materials emission reductions for carbon dioxide if these materials had been disposed rather than diverted. SCS will use the most recent version of the US EPA's Waste Reduction Model (WARM) to estimate the potential GHG emission savings.

Additionally, SCS will use the results of the Study to perform a recoverability analysis. This analysis estimates the type and number of materials that could have been diverted from disposal through existing programs. SCS will also perform a WARM analysis on these tonnages as well to estimate the additional potential GHG emissions that could be reduced if these materials had been diverted rather than disposed.

This data assessment provides insights into identifying potentially recyclable and recoverable material in the current waste stream that will help inform future programs, services, education and outreach efforts, and infrastructure needs across Nebraska.

### Quarterly Reports

SCS will prepare individual reports for each of the four seasons. A draft report will be prepared and provided to the State for review and comment. Upon receipt of the comments and edits, SCS will incorporate them into the final quarterly report and provide a final version to the State within 14 days. The quarterly reports will summarize pertinent information for a project update, include monthly project meeting notes for the season, and will include the following sections:

- **Executive Summary.** This brief section will summarize the key findings and results of the Study for the season.
- **Introduction.** The introduction will describe the purpose of the Study, project objectives, and outline how the report is organized. In addition, the introduction will acknowledge the host facility contacts and organizations that supported this project.
- **Methods.** This section will provide a table displaying the number of samples by each host facility sampled by each generating sector.
- **Results.** This section will summarize the results of the season's waste characterization study. Results will be presented in charts, graphs, and tables. Waste composition profiles will be generated for the three generating sectors (residential, ICI, and C&D).
- **Conclusion.** This section will provide a brief summary of the report's results and provide conclusions about waste management within the facility's service area.

## Overall Final Report

Prior to the development of the characterization work plans, SCS will meet with the State to discuss information desired to be presented in a final report. SCS will develop a draft outline to be used for the State characterization report. This will help inform the development of the work plans, fieldwork, and database management, and streamline final report development.

SCS will prepare a comprehensive final report that is a culmination of the waste characterization activities at the eight solid waste facilities over the four-season timeframe. A draft report will be prepared and provided to the State for an opportunity to review and comment. Upon receipt of the State's comments and edits, SCS will incorporate them into the report and provide a final version to the State within 14 days. SCS proposes that the report be organized according to the following sections:

- **Executive Summary.** This brief section will summarize the key findings and results of the Study and relevant comparisons to the 2009 Study results.
- **Introduction.** The introduction will describe the purpose of the Study, project objectives, and outline how the report is organized. In addition, the introduction will acknowledge all the host facility contacts and organizations that supported this project.
- **Background.** The background section of the report will include Nebraska's demographic, waste generation, and waste disposal data to extrapolate the results of this Study to develop a waste composition profile for the entire State and each host facility. It will include a discussion of the assumptions SCS uses to calculate and develop the waste composition profile.
- **Methods.** This section will provide a detailed discussion of the methods and protocols used to select and sort samples of waste for this Study. It will also include details of the project's overall and site-specific sampling and sorting plans, the number of samples obtained overall and by facility from each generating sector, material categories and definitions for the waste streams, data collection, equipment and calibration, and analytical techniques used.
- **Results.** This section will detail the results of the Study. Results will be presented in narrative form as well as in charts, graphs, and tables. Waste composition profiles will be generated for the three generating sectors (residential, ICI, and C&D). These waste characterization profiles will be developed for each host facility and for the State as a whole. To calculate the

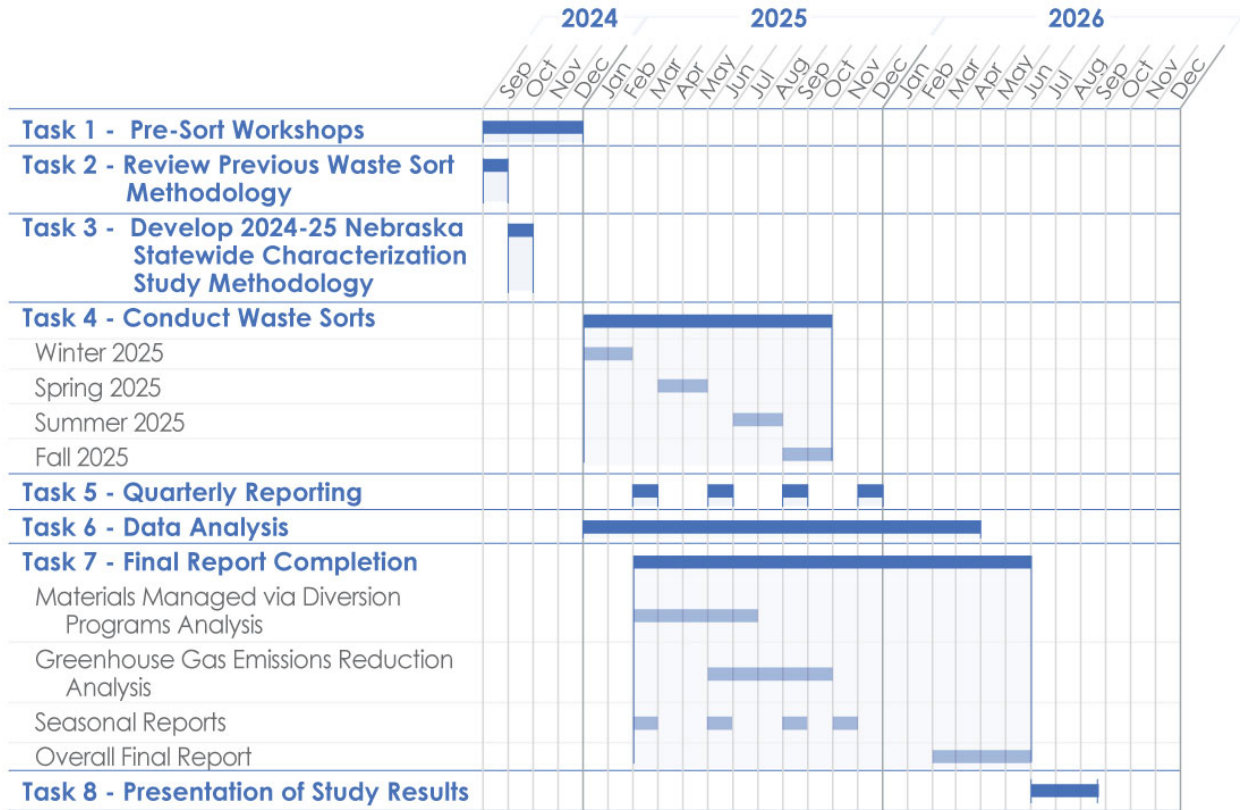
overall statewide waste composition, data from all waste-generating sectors from each host facility will be aggregated. Composition profiles from generating sectors will be compared and notable differences will be highlighted. Additionally, the result of this Study will also be compared to the 2009 Study results. The results section will also include all supporting documentation for the project, including the spreadsheet used to manage the data, make calculations, and perform statistical analysis of the data.

- **Impact of Current Recycling and Diversion Programs.** This section will discuss current recycling and diversions programs operating in the state of Nebraska and present the estimated total diverted tons. This section will present the sources of data and methodologies used to generate the tons estimated as diverted by material type, generator status, and diversion program (i.e., recycling, composting, other pathways, etc.).
- **Recoverability Analysis.** This section will include an analysis of the waste characterization data for each host facility from a recoverability standpoint. The waste characterization categories will be further categorized into one of the following:
  - **Compostable** – Encompasses materials that could be diverted for composting operations and includes materials such as food waste, yard waste, and compostable paper.
  - **Recyclable** – Includes materials that are traditionally accepted in curbside or drop-off recycling programs such as aluminum cans, plastic bottles, glass containers, corrugated cardboard, and mixed paper.
  - **Potentially Recoverable** – Includes materials that have the potential to be donated, reused, or recovered in their original or similar form such as construction/demolition debris, textiles and leather, and some household hazardous materials.
  - **Non-Marketable** – Includes materials that are not easily recyclable, markets are extremely limited or are incapable of being recycled at this time including plastic film, other organics, fines, and diapers.
- **Greenhouse Gas Emissions Reductions.** This section will present the results of the WARM analyses performed on the estimated diverted materials as well as the materials identified in the recoverability analysis that were disposed.
- **Recommendations.** The recommendations section of the report will identify materials in the waste stream that have the potential for diversion by implementing new or expanding existing diversion programs, or reduction through waste minimization or source reduction initiatives. As part of this section, we will suggest programs and policies for the State’s consideration.
- **Conclusion.** This section will provide a brief summary of the report results and provide conclusions for waste management in Nebraska based on the results of this Study.
- **Supporting Documents.** Documents used to support the report will be included as attachments. These supporting documents may include the following:
  - Sample physical sort field results.
  - Sample visual sort field results; and
  - Overall and individual sampling plans.

## STUDY PRESENTATION

SCS will develop and perform a presentation that summarizes the information from the final report for this Study. This information will be presented at a solid waste management conference (i.e., Nebraska Cornhusker Chapter Conference, etc.) as determined by the State. A draft of the presentation will be provided to the State no later than two weeks prior to the presentation date for the State’s review and comments. SCS proposes that the presentation would be 30-45 minutes in length.

## PROPOSED PROJECT TIMELINE



## RESPONSES TO TECHNICAL REQUIREMENTS

<b>Technical Requirements</b>	
<b>Req 1:</b> Contractor Work Plan	<p><b>Description:</b> Vendor shall describe in detail their plan to design and conduct Nebraska’s 2024 – 2025 Waste Characterization Study based on the <u>2009 Study</u>.</p> <p><b>Bidder Response:</b> Please see the Detailed Work Plan section above.</p>
<b>Req 2:</b> Equipment and Software	<p><b>Description:</b> Contractor should provide details on the equipment, calibration, and software they will use to complete the tasks listed in the Deliverables.</p> <p><b>Bidder Response:</b> SCS will use calibrated scales that are capable of measuring weight to the nearest 0.10 pounds to weigh materials during the characterization efforts. SCS will calibrate these scales based on the manufacturer’s recommendations. To complete other tasks for this Study, SCS will use Microsoft Office products (i.e., Word, Excel, PowerPoint, Teams, etc.), Zoom, Adobe Acrobat, and US EPA’s WARM analysis.</p>
<b>Req 3:</b> Staffing	<p><b>Description:</b> Contractor shall describe in detail their staffing plan to conduct Nebraska’s 2024 – 2025 waste characterization study.</p> <p><b>Bidder Response:</b> In summary, SCS will have two professionals at each site performing and supervising sorting activities. These activities will be supported by staff agencies with which SCS has national contracts. Furthermore, field and technical support will be provided as necessary by other SCS offices. Please see the Detailed Work Plan section above.</p>
<b>Req 4:</b> Technical Documents	<p><b>Description:</b> Contractor should detail their approach to compiling and writing technical documents and reports.</p> <p><b>Bidder Response:</b> Please see the Detailed Work Plan section above.</p>
<b>Req 5:</b> Timeline	<p><b>Description:</b> Contractor should detail their plan and approach to meet the timeline described in the Deliverables.</p> <p><b>Bidder Response:</b> Please see the Detailed Work Plan section above.</p>
<b>Req 6:</b> Training	<p><b>Description:</b> Contractor should detail their plan and approach to training and managing staff to conduct waste sorting and characterization of waste.</p> <p><b>Bidder Response:</b> Please see the Detailed Work Plan section above.</p>
<b>Req 7:</b> Quality Assurance	<p><b>Description:</b> Contractor should detail their plan and approach to following the Quality Assurance Project Plan (QAPP) developed for this project.</p> <p><b>Bidder Response:</b> Please see the Detailed Work Plan section above.</p>

**Appendix A**

**Form A – Bidder  
Proposal Point of  
Contact, Request for  
Proposal for  
Contractual Services  
Form, US Citizenship  
Attestation Form,  
Completed Section II  
thru IV**

**Form A**  
**Bidder Proposal Point of Contact**  
**Request for Proposal Number 6897 Z1**

Form A should be completed and submitted with each response to this Request for Proposal. This is intended to provide the State with information on the bidder's name and address, and the specific person(s) who are responsible for preparation of the bidder's response.

Preparation of Response Contact Information	
Bidder Name:	Stearns, Conrad and Schmidt, Consulting Engineers, Inc.
Bidder Address:	14755 Grover Street, Omaha, NE 68144
Contact Person & Title:	Michael J. Miller, Senior Vice President
E-mail Address:	mmiller@scsengineers.com
Telephone Number (Office):	402-938-0318
Telephone Number (Cellular):	402-651-8194
Fax Number:	402-884-6203

Each bidder should also designate a specific contact person who will be responsible for responding to the State if any clarifications of the bidder's response should become necessary. This will also be the person who the State contacts to set up a presentation/demonstration, if required.

Communication with the State Contact Information	
Bidder Name:	Stearns, Conrad and Schmidt, Consulting Engineers, Inc.
Bidder Address:	14755 Grover Street, Omaha, NE 68144
Contact Person & Title:	Michael J. Miller, Senior Vice President
E-mail Address:	mmiller@scsengineers.com
Telephone Number (Office):	402-938-0318
Telephone Number (Cellular):	402-651-8194
Fax Number:	402-884-6203



## REQUEST FOR PROPOSAL FOR CONTRACTUAL SERVICES FORM

### BIDDER MUST COMPLETE THE FOLLOWING

By signing this Request for Proposal for Contractual Services form, the bidder guarantees compliance with the procedures stated in this Request for Proposal and agrees to the terms and conditions unless otherwise indicated in writing, certifies that contractor maintains a drug free workplace, and certifies that bidder is not owned by the Chinese Communist Party.

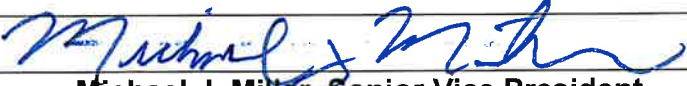
Per Nebraska's Transparency in Government Procurement Act, Neb. Rev Stat § 73-603 DAS is required to collect statistical information regarding the number of contracts awarded to Nebraska Contractors. This information is for statistical purposes only and will not be considered for contract award purposes.

**NEBRASKA CONTRACTOR AFFIDAVIT:** Bidder hereby attests that bidder is a Nebraska Contractor. "Nebraska Contractor" shall mean any bidder who has maintained a bona fide place of business and at least one employee within this state for at least the six (6) months immediately preceding the posting date of this Solicitation.

\_\_\_\_\_ I hereby certify that I am a Resident disabled veteran or business located in a designated enterprise zone in accordance with Neb. Rev. Stat. § 73-107 and wish to have preference, if applicable, considered in the award of this contract.

\_\_\_\_\_ I hereby certify that I am a blind person licensed by the Commission for the Blind & Visually Impaired in accordance with Neb. Rev. Stat. § 71-8611 and wish to have preference considered in the award of this contract.

### FORM MUST BE SIGNED MANUALLY IN INK OR BY DOCUSIGN


BIDDER:	<b>Stearns, Conrad and Schmidt, Consulting Engineers, Inc.</b>
COMPLETE ADDRESS:	<b>14755 Grover Street, Omaha, NE 68144</b>
TELEPHONE NUMBER:	<b>402-884-6202</b>
FAX NUMBER:	<b>402-884-6203</b>
DATE:	<b>July 15, 2024</b>
SIGNATURE:	
TYPED NAME & TITLE OF SIGNER:	<b>Michael J. Miller, Senior Vice President</b>

# Individual or Sole Proprietor United States Citizenship Attestation Form

For the purpose of complying with Neb. Rev. Stat. §4-108 through 4-114, I attest as follows:

<input checked="" type="checkbox"/> I am a citizen of the United States.
<b>-OR-</b>
<input type="checkbox"/> I am a qualified alien under the federal Immigration and Nationality Act. My immigration status and alien number are as follows: _____.
I agree to provide a copy of my USCIS documentation upon request.

**I hereby attest that my response and the information provided on this form and any related application for public benefits are true, complete, and accurate, and I understand that this information may be used to verify my lawful presence in the United States.**

PRINT NAME	Michael J. Miller _____ (first, middle, last)
SIGNATURE	 _____
DATE	July 15, 2024 _____

## II. TERMS AND CONDITIONS

**Bidders should complete Sections 0 thru Error! Reference source not found. as part of their proposal.** Bidder is expected to read the Terms and Conditions and should initial either accept, reject, or reject and provide alternative language for each clause. The bidder should also provide an explanation of why the bidder rejected the clause or rejected the clause and provided alternate language. By signing the Request for Proposal, bidder is agreeing to be legally bound by all the accepted terms and conditions, and any proposed alternative terms and conditions submitted with the proposal. The State reserves the right to negotiate rejected or proposed alternative language. If the State and bidder fail to agree on the final Terms and Conditions, the State reserves the right to reject the proposal. The State of Nebraska is soliciting proposals in response to this Request for Proposal. The State of Nebraska reserves the right to reject proposals that attempt to substitute the bidder's commercial contracts and/or documents for this Request for Proposal.

The bidders should submit with their proposal any license, user agreement, service level agreement, or similar documents that the bidder wants incorporated in the Contract. The State will not consider incorporation of any document not submitted with the bidder's proposal as the document will not have been included in the evaluation process. These documents shall be subject to negotiation and will be incorporated as addendums if agreed to by the Parties.

If a conflict or ambiguity arises after the Addendum to Contract Award have been negotiated and agreed to, the Addendum to Contract Award shall be interpreted as follows:

1. If only one Party has a particular clause then that clause shall control,
2. If both Parties have a similar clause, but the clauses do not conflict, the clauses shall be read together,
3. If both Parties have a similar clause, but the clauses conflict, the State's clause shall control.

### A. GENERAL

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

1. The contract resulting from this Request for Proposal shall incorporate the following documents:
  - a. Request for Proposal, including any attachments and addenda;
  - b. Amendments to the Request for Proposal;
  - c. Questions and Answers;
  - d. Bidder's properly submitted proposal, including any terms and conditions or agreements submitted by the bidder; and
  - e. Amendments and Addendums to the Contract.

These documents constitute the entirety of the contract.

Unless otherwise specifically stated in a future contract amendment, in case of any conflict between the incorporated documents, the documents shall govern in the following order of preference with number one (1) receiving preference over all other documents and with each lower numbered document having preference over any higher numbered document: 1) Amendment or Addendum to the executed Contract with the most recent dated amendment or addendum having the highest priority, 2) Amendments to the Request for Proposal, 3) Questions and Answers, 4) the original Request for Proposal document and any Addenda or attachments, and 5) the Contractor's submitted Proposal, including any terms and conditions or agreements that are accepted by the State.

Unless otherwise specifically agreed to in writing by the State, the State's standard terms and conditions, as executed by the State, shall always control over any terms and conditions or agreements submitted or included by the Contractor.

Any ambiguity or conflict in the contract discovered after its execution, not otherwise addressed herein, shall be resolved in accordance with the rules of contract interpretation as established in the State of Nebraska.

**B. NOTIFICATION**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

Bidder and State shall identify the contract manager who shall serve as the point of contact for the executed contract.

Communications regarding the executed contract shall be in writing and shall be deemed to have been given if delivered personally; electronically, return receipt requested; or mailed, return receipt requested. All notices, requests, or communications shall be deemed effective upon receipt.

Either party may change its address for notification purposes by giving notice of the change and setting forth the new address and an effective date.

**C. BUYER'S REPRESENTATIVE**

The State reserves the right to appoint a Buyer's Representative to manage or assist the Buyer in managing the contract on behalf of the State. The Buyer's Representative will be appointed in writing, and the appointment document will specify the extent of the Buyer's Representative authority and responsibilities. If a Buyer's Representative is appointed, the bidder will be provided a copy of the appointment document and is expected to cooperate accordingly with the Buyer's Representative. The Buyer's Representative has no authority to bind the State to a contract, amendment, addendum, or other change or addition to the contract.

**D. GOVERNING LAW (Nonnegotiable)**

Notwithstanding any other provision of this contract, or any amendment or addendum(s) entered into contemporaneously or at a later time, the parties understand and agree that, (1) the State of Nebraska is a sovereign state and its authority to contract is therefore subject to limitation by the State's Constitution, statutes, common law, and regulation; (2) this contract will be interpreted and enforced under the laws of the State of Nebraska; (3) any action to enforce the provisions of this agreement must be brought in the State of Nebraska per state law; (4) the person signing this contract on behalf of the State of Nebraska does not have the authority to waive the State's sovereign immunity, statutes, common law, or regulations; (5) the indemnity, limitation of liability, remedy, and other similar provisions of the final contract, if any, are entered into subject to the State's Constitution, statutes, common law, regulations, and sovereign immunity; and, (6) all terms and conditions of the final contract, including but not limited to the clauses concerning third party use, licenses, warranties, limitations of liability, governing law and venue, usage verification, indemnity, liability, remedy or other similar provisions of the final contract are entered into specifically subject to the State's Constitution, statutes, common law, regulations, and sovereign immunity.

The Parties must comply with all applicable local, state, and federal laws, ordinances, rules, orders, and regulations.

**E. DISCOUNTS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

Prices quoted shall be inclusive of ALL trade discounts. Cash discount terms of less than thirty (30) days will not be considered as part of the proposal. Cash discount periods will be computed from the date of receipt of a properly executed claim voucher or the date of completion of delivery of all items in a satisfactory condition, whichever is later.

**F. PRICES**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

Prices quoted shall be net, including transportation and delivery charges fully prepaid by the bidder, F.O.B. destination named in the Request for Proposal. No additional charges will be allowed for packing, packages, or partial delivery costs. When an arithmetic error has been made in the extended total, the unit price will govern.

All prices, costs, and terms and conditions submitted in the proposal shall remain fixed and valid commencing on the opening date of the proposal until the contract terminates or expires.

**The State reserves the right to deny any requested price increase. No price increases are to be billed to any State Agencies prior to written amendment of the contract by the parties.**

**The State will be given full proportionate benefit of any decreases for the term of the contract.**

**G. BEGINNING OF WORK & SUSPENSION OF SERVICES**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The bidder shall not commence any billable work until a valid contract has been fully executed by the State and the successful Contractor. The Contractor will be notified in writing when work may begin.

The State may, at any time and without advance notice, require the Contractor to suspend any or all performance or deliverables provided under this Contract. In the event of such suspension, the Contract Manager or POC, or their designee, will issue a written order to stop work. The written order will specify which activities are to be immediately suspended and the reason(s) for the suspension. Upon receipt of such order, the Contractor shall immediately comply with its terms and take all necessary steps to mitigate and eliminate the incurrence of costs allocable to the work affected by the order during the period of suspension. The suspended performance or deliverables may only resume when the State provides the Contractor with written notice that such performance or deliverables may resume, in whole or in part.

**H. AMENDMENT**

This Contract may be amended in writing, within scope, upon the agreement of both parties.

**I. CHANGE ORDERS OR SUBSTITUTIONS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The State and the Contractor, upon the written agreement, may make changes to the contract within the general scope of the Request for Proposal. Changes may involve specifications, the quantity of work, or such other items as the State may find necessary or desirable. Corrections of any deliverable, service, or work required pursuant to the contract shall not be deemed a change. The Contractor may not claim forfeiture of the contract by reasons of such changes.

The Contractor shall prepare a written description of the work required due to the change and an itemized cost sheet for the change. Changes in work and the amount of compensation to be paid to the Contractor shall be determined in accordance with applicable unit prices if any, a pro-rated value, or through negotiations. The State shall not incur a price increase for changes that should have been included in the Contractor's proposal, were foreseeable, or result from difficulties with or failure of the Contractor's proposal or performance.

No change shall be implemented by the Contractor until approved by the State, and the Contract is amended to reflect the change and associated costs, if any. If there is a dispute regarding the cost, but both parties agree that immediate implementation is necessary, the change may be implemented, and cost negotiations may continue with both Parties retaining all remedies under the contract and law.

**\*\*\*Contractor will not substitute any item that has been awarded without prior written approval of NDEE\*\*\***

**J. RECORD OF VENDOR PERFORMANCE**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The State may document the vendor's performance, which may include, but is not limited to, the customer service provided by the vendor, the ability of the vendor, the skill of the vendor, and any instance(s) of products or services delivered or performed which fail to meet the terms of the purchase order, contract, and/or Request for Proposal specifications. In addition to other remedies and options available to the State, the State may issue one or more notices to the vendor outlining any issues the State has regarding the vendor's performance for a specific contract ("Vendor Performance Notice"). The State may also document the Vendor's performance in a report, which may or may not be provided to the vendor ("Vendor Improvement Request"). The Vendor shall respond to any Vendor Performance Notice or Vendor Improvement Request in accordance with such notice or request. At the sole discretion of the State, such Vendor Performance Notices and Vendor Improvement Requests may be placed in the State's records regarding the vendor and may be considered by the State and held against the vendor in any future contract or award opportunity.

**K. CORRECTIVE ACTION PLAN**

If Contractor is failing to meet the Scope of Work, in whole or in part, the State may require the Contractor to complete a corrective action plan ("CAP"). The State will identify issues with the Contractor's performance and will set a deadline for the CAP to be provided. The Contractor must provide a written response to each identified issue and what steps the Contractor will take to resolve each issue, including the timeline(s) for resolution. If the Contractor fails to adequately provide the CAP in accordance with this section, fails to adequately resolve the issues described in the CAP, or fails to resolve the issues described in the CAP by the relevant deadline, the State may withhold payments and exercise any legal remedy available.

**L. NOTICE OF POTENTIAL CONTRACTOR BREACH**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

If Contractor breaches the contract or anticipates breaching the contract, the Contractor shall immediately give written notice to the State. The notice shall explain the breach or potential breach, a proposed cure, and may include a request for a waiver of the breach if so desired. The State may, in its discretion, temporarily or permanently waive the breach. By granting a waiver, the State does not forfeit any rights or remedies to which the State is entitled by law or equity, or pursuant to the provisions of the contract. Failure to give immediate notice, however, may be grounds for denial of any request for a waiver of a breach.

**M. BREACH**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
		MJM	See proposed redline edits below.

Either Party may terminate the contract, in whole or in part, if the other Party breaches its duty to perform its obligations under the contract in a timely and proper manner. Termination requires written notice of default and a thirty (30) calendar day (or longer at the non-breaching Party's discretion considering the gravity and nature of the default) cure period. Said notice shall be delivered by email to the contractor's point of contact with acknowledgement from the contractor, Certified Mail - Return Receipt Requested, or in person with proof of delivery. Allowing time to cure a failure or breach of contract does not waive the right to immediately terminate the contract for the same or different contract breach which may occur at a different time. In case of default of the Contractor, the State may contract the service from other sources and hold the Contractor responsible for any excess cost occasioned thereby.

~~The State's failure to make payment shall not be a breach, and the Contractor shall retain all available statutory remedies and protections.~~

**N. NON-WAIVER OF BREACH**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The acceptance of late performance with or without objection or reservation by a Party shall not waive any rights of the Party nor constitute a waiver of the requirement of timely performance of any obligations remaining to be performed.

**O. SEVERABILITY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

If any term or condition of the contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the contract did not contain the provision held to be invalid or illegal.

**P. INDEMNIFICATION**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
		MJM	See proposed redline edits below.

**1. GENERAL**

The Contractor agrees to defend, indemnify, and hold harmless the State and its employees, volunteers, agents, and its elected and appointed officials ("the indemnified parties") from and against any and all third party claims, liens, demands, damages, liability, actions, causes of action, losses, judgments, costs, and

expenses of every nature, including investigation costs and expenses, settlement costs, and attorney fees and expenses (“the claims”), sustained or asserted against the State for personal injury, death, or property loss or damage, ~~arising out of, resulting from, or attributable to~~ to the extent caused by the willful misconduct, negligence, error, or omission of the Contractor, its employees, Subcontractors, consultants, representatives, and agents, resulting from this contract, except to the extent such Contractor liability is attenuated by any action of the State or any of the indemnified parties which directly and proximately contributed to the claims.

**2. INTELLECTUAL PROPERTY**

The Contractor agrees it will, at its sole cost and expense, defend, indemnify, and hold harmless the indemnified parties from and against any and all claims, to the extent such claims arise out of, result from, or are attributable to, the actual or alleged infringement or misappropriation of any patent, copyright, trade secret, trademark, or confidential information of any third party by the Contractor or its employees, Subcontractors, consultants, representatives, and agents; provided, however, the State gives the Contractor prompt notice in writing of the claim. The Contractor may not settle any infringement claim that will affect the State’s use of the Licensed Software without the State’s prior written consent, which consent may be withheld for any reason.

If a judgment or settlement is obtained or reasonably anticipated against the State’s use of any intellectual property for which the Contractor has indemnified the State, the Contractor shall, at the Contractor’s sole cost and expense, promptly modify the item or items which were determined to be infringing, acquire a license or licenses on the State’s behalf to provide the necessary rights to the State to eliminate the infringement, or provide the State with a non-infringing substitute that provides the State the same functionality. At the State’s election, the actual or anticipated judgment may be treated as a breach of warranty by the Contractor, and the State may receive the remedies provided under this Request for Proposal.

**3. PERSONNEL**

The Contractor shall, at its expense, indemnify and hold harmless the indemnified parties from and against any claim with respect to withholding taxes, worker’s compensation, or employee benefits, ~~or any other claim, demand, liability, damage, or loss of any nature~~ relating to any of the personnel, including subcontractor’s and their employees, provided by the Contractor.

**4. SELF-INSURANCE**

The State of Nebraska is self-insured for any loss and purchases excess insurance coverage pursuant to Neb. Rev. Stat. § 81-8,239.01. If there is a presumed loss under the provisions of this agreement, Contractor may file a claim with the Office of Risk Management pursuant to Neb. Rev. Stat. §§ 81-8,239.01 to 81-8,306 for review by the State Claims Board. The State retains all rights and immunities under the State Miscellaneous (Neb. Rev. Stat. § 81-8,294), Tort (Neb. Rev. Stat. § 81-8,209), and Contract Claim Acts (Neb. Rev. Stat. § 81-8,302), as outlined in state law and accepts liability under this agreement only to the extent provided by law.

**5. ALL REMEDIES AT LAW**

Nothing in this agreement shall be construed as an indemnification by one Party of the other for liabilities of a Party or third parties for property loss or damage or death or personal injury arising out of and during the performance of this contract. Any liabilities or claims for property loss or damages or for death or personal injury by a Party or its agents, employees, contractors or assigns or by third persons, shall be determined according to applicable law.

6. The Parties acknowledge that Attorney General for the State of Nebraska is required by statute to represent the legal interests of the State, and that any provision of this indemnity clause is subject to the statutory authority of the Attorney General.

**Q. ATTORNEY’S FEES**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			



In the event of any litigation, appeal, or other legal action to enforce any provision of the contract, the Parties agree to pay all expenses of such action, as permitted by law and if ordered by the court, including attorney's fees and costs, if the other Party prevails.

**R. ASSIGNMENT, SALE, OR MERGER**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

Either Party may assign the contract upon mutual written agreement of the other Party. Such agreement shall not be unreasonably withheld.

The Contractor retains the right to enter into a sale, merger, acquisition, internal reorganization, or similar transaction involving Contractor's business. Contractor agrees to cooperate with the State in executing amendments to the contract to allow for the transaction. If a third party or entity is involved in the transaction, the Contractor will remain responsible for performance of the contract until such time as the person or entity involved in the transaction agrees in writing to be contractually bound by this contract and perform all obligations of the contract.

**S. CONTRACTING WITH OTHER NEBRASKA POLITICAL SUBDIVISIONS OF THE STATE OR ANOTHER STATE**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The Contractor may, but shall not be required to, allow agencies, as defined in Neb. Rev. Stat. § 81-145(3), to use this contract. The terms and conditions, including price, of the contract may not be amended. The State shall not be contractually obligated or liable for any contract entered into pursuant to this clause. A listing of Nebraska political subdivisions may be found at the website of the Nebraska Auditor of Public Accounts.

The Contractor may, but shall not be required to, allow other states, agencies or divisions of other states, or political subdivisions of other states to use this contract. The terms and conditions, including price, of this contract shall apply to any such contract, but may be amended upon mutual consent of the Parties. The State of Nebraska shall not be contractually or otherwise obligated or liable under any contract entered into pursuant to this clause. The State shall be notified if a contract is executed based upon this contract.

**T. FORCE MAJEURE**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

Neither Party shall be liable for any costs or damages, or for default resulting from its inability to perform any of its obligations under the contract due to a natural or manmade event outside the control and not the fault of the affected Party ("Force Majeure Event") that was not foreseeable at the time the Contract was executed. The Party so affected shall immediately make a written request for relief to the other Party and shall have the burden of proof to justify the request. The other Party may grant the relief requested; relief may not be unreasonably withheld. Labor disputes with the impacted Party's own employees will not be considered a Force Majeure Event.

**U. CONFIDENTIALITY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

All materials and information provided by the Parties or acquired by a Party on behalf of the other Party shall be regarded as confidential information. All materials and information provided or acquired shall be handled in accordance with federal and state law, and ethical standards. Should said confidentiality be breached by a Party, the Party shall notify the other Party immediately of said breach and take immediate corrective action.

It is incumbent upon the Parties to inform their officers and employees of the penalties for improper disclosure imposed by the Privacy Act of 1974, 5 U.S.C. 552a. Specifically, 5 U.S.C. 552a (i)(1), which is made applicable by 5 U.S.C. 552a (m)(1), provides that any officer or employee, who by virtue of his/her employment or official position has possession of or access to agency records which contain individually identifiable information, the disclosure of which is prohibited by the Privacy Act or regulations established thereunder, and who knowing that disclosure of the specific material is prohibited, willfully discloses the material in any manner to any person or agency not entitled to receive it, shall be guilty of a misdemeanor and fined not more than \$5,000.

**V. EARLY TERMINATION**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The contract may be terminated as follows:

1. The State and the Contractor, by mutual written agreement, may terminate the contract, in whole or in part, at any time.
2. The State, in its sole discretion, may terminate the contract, in whole or in part, for any reason upon thirty (30) calendar day's written notice to the Contractor. Such termination shall not relieve the Contractor of warranty or other service obligations incurred under the terms of the contract. In the event of termination, the Contractor shall be entitled to payment, determined on a pro rata basis, for products or services satisfactorily performed or provided.
3. The State may terminate the contract, in whole or in part, immediately for the following reasons:
  - a. if directed to do so by statute,
  - b. Contractor has made an assignment for the benefit of creditors, has admitted in writing its inability to pay debts as they mature, or has ceased operating in the normal course of business,
  - c. a trustee or receiver of the Contractor or of any substantial part of the Contractor's assets has been appointed by a court,
  - d. fraud, misappropriation, embezzlement, malfeasance, misfeasance, or illegal conduct pertaining to performance under the contract by its Contractor, its employees, officers, directors, or shareholders,
  - e. an involuntary proceeding has been commenced by any Party against the Contractor under any one of the chapters of Title 11 of the United States Code and (i) the proceeding has been pending for at least sixty (60) calendar days; or (ii) the Contractor has consented, either expressly or by operation of law, to the entry of an order for relief; or (iii) the Contractor has been decreed or adjudged a debtor,
  - f. a voluntary petition has been filed by the Contractor under any of the chapters of Title 11 of the United States Code,
  - g. Contractor intentionally discloses confidential information,
  - h. Contractor has or announces it will discontinue support of the deliverable; and,
  - i. In the event funding is no longer available.

**W. CONTRACT CLOSEOUT**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
		MJM	See proposed redline edits below.

Upon contract closeout for any reason the Contractor shall within 30 days, unless stated otherwise herein:

1. Transfer all completed or partially completed deliverables to the State, to the extent paid for
2. Transfer ownership and title to all completed or partially completed deliverables to the State, to the extent paid for
3. Return to the State all information and data, unless the Contractor is permitted to keep the information or data by contract or rule of law. Contractor may retain one copy of any information or data as required to comply with applicable work product documentation standards or as are automatically retained in the course of Contractor's routine back up procedures,
4. Cooperate with any successor Contactor, person or entity in the assumption of any or all of the obligations of this contract,
5. Cooperate with any successor Contactor, person or entity with the transfer of information or data related to this contract,
6. Return or vacate any state owned real or personal property; and,
7. Return all data in a mutually acceptable format and manner.

Nothing in this Section should be construed to require the Contractor to surrender intellectual property, real or personal property, or information or data owned by the Contractor for which the State has no legal claim.

To the extent the State requires Contractor to transfer to the State any partially completed deliverables, including any partially completed designs, drawings, calculations, or specifications, the State understands and agrees that it shall not be entitled to use or rely on any such partially completed deliverables, and agrees to waive any and all claims it might have against Contractor for, and to release Contractor from, any and all costs, expenses, damages, losses, and liabilities arising out of or related to the use of or reliance on such partially completed deliverables.

### III. CONTRACTOR DUTIES

#### A. INDEPENDENT CONTRACTOR / OBLIGATIONS

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

It is agreed that the Contractor is an independent contractor and that nothing contained herein is intended or should be construed as creating or establishing a relationship of employment, agency, or a partnership.

The Contractor is solely responsible for fulfilling the contract. The Contractor or the Contractor's representative shall be the sole point of contact regarding all contractual matters.

The Contractor shall secure, at its own expense, all personnel required to perform the services under the contract. The personnel the Contractor uses to fulfill the contract shall have no contractual or other legal relationship with the State; they shall not be considered employees of the State and shall not be entitled to any compensation, rights or benefits from the State, including but not limited to, tenure rights, medical and hospital care, sick and vacation leave, severance pay, or retirement benefits.

By-name personnel commitments made in the bidder's proposal shall not be changed without the prior written approval of the State. Replacement of these personnel, if approved by the State, shall be with personnel of equal or greater ability and qualifications.

All personnel assigned by the Contractor to the contract shall be employees of the Contractor or a subcontractor and shall be fully qualified to perform the work required herein. Personnel employed by the Contractor or a subcontractor to fulfill the terms of the contract shall remain under the sole direction and control of the Contractor or the subcontractor respectively.

With respect to its employees, the Contractor agrees to be solely responsible for the following:

1. Any and all pay, benefits, and employment taxes and/or other payroll withholding,
2. Any and all vehicles used by the Contractor's employees, including all insurance required by state law,
3. Damages incurred by Contractor's employees within the scope of their duties under the contract,
4. Maintaining Workers' Compensation and health insurance that complies with state and federal law and submitting any reports on such insurance to the extent required by governing law,
5. Determining the hours to be worked and the duties to be performed by the Contractor's employees; and,
6. All claims on behalf of any person arising out of employment or alleged employment (including without limit claims of discrimination alleged against the Contractor, its officers, agents, or subcontractors or subcontractor's employees).

If the Contractor intends to utilize any subcontractor, the subcontractor's level of effort, tasks, and time allocation should be clearly defined in the bidder's proposal. The Contractor shall agree that it will not utilize any subcontractors not specifically included in its proposal in the performance of the contract without the prior written authorization of the State.

The State reserves the right to require the Contractor to reassign or remove from the project any Contractor or subcontractor employee.

Contractor shall insure that the terms and conditions contained in any contract with a subcontractor does not conflict with the terms and conditions of this contract.

The Contractor shall include a similar provision, for the protection of the State, in the contract with any Subcontractor engaged to perform work on this contract.

**B. EMPLOYEE WORK ELIGIBILITY STATUS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of an employee.

If the Contractor is an individual or sole proprietorship, the following applies:

1. The Contractor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at <https://das.nebraska.gov/materiel/docs/pdf/Individual%20or%20Sole%20Proprietor%20United%20States%20Attestation%20Form%20English%20and%20Spanish.pdf>
2. The completed United States Attestation Form should be submitted with the Request for Proposal response.
3. If the Contractor indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the US Citizenship and Immigration Services documentation required to verify the Contractor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.
4. The Contractor understands and agrees that lawful presence in the United States is required, and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. § 4-108.

**C. COMPLIANCE WITH CIVIL RIGHTS LAWS AND EQUAL OPPORTUNITY EMPLOYMENT / NONDISCRIMINATION (Nonnegotiable)**

The Contractor shall comply with all applicable local, state, and federal statutes and regulations regarding civil rights laws and equal opportunity employment. The Nebraska Fair Employment Practice Act prohibits Contractors of the State of Nebraska, and their Subcontractors, from discriminating against any employee or applicant for employment, with respect to hire, tenure, terms, conditions, compensation, or privileges of employment because of race, color, religion, sex, disability, marital status, or national origin (Neb. Rev. Stat. §§ 48-1101 to 48-1125). The Contractor guarantees compliance with the Nebraska Fair Employment Practice Act, and breach of this provision shall be regarded as a material breach of contract. The Contractor shall insert a similar provision in all Subcontracts for goods and services to be covered by any contract resulting from this Request for Proposal.

**D. COOPERATION WITH OTHER CONTRACTORS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

Contractor may be required to work with or in close proximity to other contractors or individuals that may be working on same or different projects. The Contractor shall agree to cooperate with such other contractors or individuals and shall not commit or permit any act which may interfere with the performance of work by any other contractor or individual. Contractor is not required to compromise Contractor's intellectual property or proprietary information unless expressly required to do so by this contract.

**E. PERMITS, REGULATIONS, LAWS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
		MJM	See proposed redline edits below.

The contract price shall include the cost of all royalties, licenses, permits, and approvals, whether arising from patents, trademarks, copyrights or otherwise, that are ~~in any way involved in~~ specified in the contract to be obtained by the Contractor, or required by law to be obtained by the Contractor in order to perform the services under the contract. The Contractor shall obtain and pay for all royalties, licenses, and permits, and approvals ~~necessary for~~ specified in the contract to be obtained by the Contractor, or required by law to be obtained by the Contractor in order to perform the services under the execution of the contract. The Contractor must guarantee that it has the full legal right to the materials, supplies, equipment, software, and other items used to execute this contract.

**F. OWNERSHIP OF INFORMATION AND DATA / DELIVERABLES**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
		MJM	See proposed redline edits below.

The State shall have the ~~unlimited~~ right to publish, duplicate, use, and disclose all information and data developed or obtained by the Contractor on behalf of the State pursuant to this contract for the purposes for which such information and data were obtained and provided.

The State shall own and hold exclusive title to any deliverable developed as a result of this contract, to the extent paid for. Contractor shall have no ownership interest or title, and shall not patent, license, or copyright, duplicate, transfer, sell, or exchange, the design, specifications, concept, or deliverable, to the extent paid for.

**G. INSURANCE REQUIREMENTS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
		MJM	See proposed redline edits below.

The Contractor shall throughout the term of the contract maintain insurance as specified herein and provide the State a current Certificate of Insurance/Acord Form (COI) verifying the coverage. The Contractor shall not commence work on the contract until the insurance is in place. If Contractor subcontracts any portion of the Contract the Contractor must, throughout the term of the contract, either:

1. Provide equivalent insurance for each subcontractor and provide a COI verifying the coverage for the subcontractor,
2. Require each subcontractor to have equivalent insurance and provide written notice to the State that the Contractor has verified that each subcontractor has the required coverage; or,
3. Provide the State with copies of each subcontractor's Certificate of Insurance evidencing the required coverage.

The Contractor shall not allow any Subcontractor to commence work until the Subcontractor has equivalent insurance. The failure of the State to require a COI, or the failure of the Contractor to provide a COI or require subcontractor insurance shall not limit, relieve, or decrease the liability of the Contractor hereunder.

In the event that any policy written on a claims-made basis terminates or is canceled during the term of the contract or within (one) (1) year of termination or expiration of the contract, the contractor shall obtain an extended discovery or reporting period, or a new insurance policy, providing coverage required by this contract for the term of the contract and (one) (1) year following termination or expiration of the contract.

If by the terms of any insurance a mandatory deductible is required, or if the Contractor elects to increase the mandatory deductible amount, the Contractor shall be responsible for payment of the amount of the deductible in the event of a paid claim.

Notwithstanding any other clause in this Contract, the State may recover up to the liability limits of the insurance policies required herein.

**1. WORKERS' COMPENSATION INSURANCE**

The Contractor shall take out and maintain during the life of this contract the statutory Workers' Compensation and Employer's Liability Insurance for all of the contractors' employees to be engaged in work on the project under this contract and, in case any such work is sublet, the Contractor shall require the Subcontractor similarly to provide Worker's Compensation and Employer's Liability Insurance for all of the Subcontractor's employees to be engaged in such work. This policy shall be written to meet the statutory requirements for the state in which the work is to be performed, including Occupational Disease. **The policy shall include a waiver of subrogation in favor of the State. The COI shall contain the mandatory COI subrogation waiver language found hereinafter.** The amounts of such insurance shall not be less than the limits stated hereinafter. For employees working in the State of Nebraska, the policy must be written by an entity authorized by the State of Nebraska Department of Insurance to write Workers' Compensation and Employer's Liability Insurance for Nebraska employees.

**2. COMMERCIAL GENERAL LIABILITY INSURANCE AND COMMERCIAL AUTOMOBILE LIABILITY INSURANCE**

The Contractor shall take out and maintain during the life of this contract such Commercial General Liability Insurance and Commercial Automobile Liability Insurance as shall protect Contractor ~~and any Subcontractor performing work covered by this contract~~ from claims for damages for bodily injury, including death, as well as from claims for property damage, which may arise from operations under this contract, whether such operation be by the Contractor or by any Subcontractor or by anyone directly or indirectly employed by either of them, and the amounts of such insurance shall not be less than limits stated hereinafter.

The Commercial General Liability Insurance shall be written on an **occurrence basis**, and provide Premises/Operations, Products/Completed Operations, Independent Contractors, Personal Injury, and Contractual Liability coverage. **The policy shall include the State, and others as required by the contract documents, as Additional Insured(s). This policy shall be primary, and any insurance or self-insurance carried by the State shall be considered secondary and non-contributory. The COI shall contain the mandatory COI liability waiver language found hereinafter.** The Commercial Automobile Liability Insurance shall be written to cover all Owned, Non-owned, and Hired vehicles.

<b>REQUIRED INSURANCE COVERAGE</b>	
<b>COMMERCIAL GENERAL LIABILITY</b>	
General Aggregate	\$2,000,000
Products/Completed Operations Aggregate	\$2,000,000
Personal/Advertising Injury	\$1,000,000 per occurrence
Bodily Injury/Property Damage	\$1,000,000 per occurrence
Medical Payments	\$10,000 any one person
Damage to Rented Premises (Fire)	\$300,000 each occurrence
Contractual	Included
XCU Liability (Explosion, Collapse, and Underground Damage)	Included
Independent Contractors	Included
Abuse & Molestation	Included
<b>WORKER'S COMPENSATION</b>	
Employers Liability Limits	\$500K/\$500K/\$500K
Statutory Limits- All States	Statutory - State of Nebraska
Voluntary Compensation	Statutory
<b>COMMERCIAL AUTOMOBILE LIABILITY</b>	
Bodily Injury/Property Damage	\$1,000,000 combined single limit
Include All Owned, Hired & Non-Owned Automobile liability	Included
Motor Carrier Act Endorsement	Where Applicable
<b>UMBRELLA/EXCESS LIABILITY</b>	
Over Primary Insurance	\$5,000,000 per occurrence
<b>PROFESSIONAL LIABILITY</b>	
All Other Professional Liability (Errors & Omissions)	\$1,000,000 Per Claim / Aggregate
<b>COMMERCIAL CRIME</b>	
Crime/Employee Dishonesty Including 3rd Party Fidelity	\$1,000,000
<b>MANDATORY COI SUBROGATION WAIVER LANGUAGE</b>	
"Workers' Compensation policy shall include a waiver of subrogation in favor of the State of Nebraska."	
<b>MANDATORY COI LIABILITY WAIVER LANGUAGE</b>	
"Commercial General Liability & Commercial Automobile Liability policies shall name the State of Nebraska as an Additional Insured and the policies shall be primary and any insurance or self-insurance carried by the State shall be considered secondary and non-contributory as additionally insured."	

**3. EVIDENCE OF COVERAGE**

The Contractor shall furnish the Contract Manager, via email, with a certificate of insurance coverage complying with the above requirements prior to beginning work at:

Nebraska Department of Environment and Energy  
 Attn: NDEE c/o Douglas Barry  
 RFP # 6897 Z1  
 email: douglas.barry@nebraska.gov

Nebraska Department of Environment and Energy  
 245 Fallbrook Avenue, Suite 100  
 Lincoln, NE 68521

These certificates or the cover sheet shall reference the RFP number, and the certificates shall include the name of the company, policy numbers, effective dates, dates of expiration, and amounts and types of coverage afforded. If the State is damaged by the failure of the Contractor to maintain such insurance, then the Contractor shall be responsible for all reasonable costs properly attributable thereto.

Reasonable notice of cancellation of any required insurance policy must be submitted to the contract manager as listed above when issued and a new coverage binder shall be submitted immediately to ensure no break in coverage.

**4. DEVIATIONS**

The insurance requirements are subject to limited negotiation. Negotiation typically includes, but is not necessarily limited to, the correct type of coverage, necessity for Workers' Compensation, and the type of automobile coverage carried by the Contractor.



**H. ANTITRUST**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The Contractor hereby assigns to the State any and all claims for overcharges as to goods and/or services provided in connection with this contract resulting from antitrust violations which arise under antitrust laws of the United States and the antitrust laws of the State.

**I. CONFLICT OF INTEREST**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

By submitting a proposal, bidder certifies that no relationship exists between the bidder and any person or entity which either is, or gives the appearance of, a conflict of interest related to this Request for Proposal or project.

Bidder further certifies that bidder will not employ any individual known by bidder to have a conflict of interest nor shall bidder take any action or acquire any interest, either directly or indirectly, which will conflict in any manner or degree with the performance of its contractual obligations hereunder or which creates an actual or appearance of conflict of interest.

If there is an actual or perceived conflict of interest, bidder shall provide with its proposal a full disclosure of the facts describing such actual or perceived conflict of interest and a proposed mitigation plan for consideration. The State will then consider such disclosure and proposed mitigation plan and either approve or reject as part of the overall bid evaluation.

**J. SITE RULES AND REGULATIONS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The Contractor shall use its best efforts to ensure that its employees, agents, and Subcontractors comply with site rules and regulations while on State premises. If the Contractor must perform on-site work outside of the daily operational hours set forth by the State, it must make arrangements with the State to ensure access to the facility and the equipment has been arranged. No additional payment will be made by the State on the basis of lack of access, unless the State fails to provide access as agreed to in writing between the State and the Contractor.

**K. ADVERTISING**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The Contractor agrees not to refer to the contract award in advertising in such a manner as to state or imply that the company or its goods or services are endorsed or preferred by the State. Any publicity releases pertaining to the project shall not be issued without prior written approval from the State.

**L. DISASTER RECOVERY/BACK UP PLAN**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			SCS recovery and backup plans will be made available upon request.

The Contractor shall have a disaster recovery and back-up plan, of which a copy should be provided upon request to the State, which includes, but is not limited to equipment, personnel, facilities, and transportation, in order to continue delivery of goods and services as specified under the specifications in the contract in the event of a disaster.

**M. DRUG POLICY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

Contractor certifies it maintains a drug free workplace environment to ensure worker safety and workplace integrity. Contractor agrees to provide a copy of its drug free workplace policy at any time upon request by the State.

**N. WARRANTY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
		MJM	See proposed redline edits below.

Despite any clause to the contrary, the Contractor represents ~~and warrants~~ that its services hereunder shall be performed by competent personnel and shall be of professional quality consistent with generally accepted industry standards for the performance of such services and shall comply in all respects with the requirements of this Agreement. For any breach of this ~~warranty representation~~, the Contractor shall, for a period of ninety (90) days from performance of the service, perform the services again, at no cost to the State, or if Contractor is unable to perform the services ~~as warranted in accordance with the generally accepted industry standards~~, Contractor shall reimburse the State all fees paid to Contractor for the unsatisfactory services. The rights and remedies of the parties under this ~~warranty clause~~ are in addition to any other rights and remedies of the parties provided by law or equity, including, without limitation actual damages, and, as applicable and awarded under the law, to a prevailing party, reasonable attorneys' fees and costs.

**O. TIME IS OF THE ESSENCE**

Time is of the essence with respect to Contractor's performance and deliverables pursuant to this Contract.

## IV. PAYMENT

### A. PROHIBITION AGAINST ADVANCE PAYMENT (Nonnegotiable)

Pursuant to Neb. Rev. Stat. § 81-2403, “[n]o goods or services shall be deemed to be received by an agency until all such goods or services are completely delivered and finally accepted by the agency.”

### B. TAXES (Nonnegotiable)

The State is not required to pay taxes and assumes no such liability as a result of this Request for Proposal. The Contractor may request a copy of the Nebraska Department of Revenue, Nebraska Resale or Exempt Sale Certificate for Sales Tax Exemption, Form 13 for their records. Any property tax payable on the Contractor's equipment which may be installed in a state-owned facility is the responsibility of the Contractor.

### C. INVOICES

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

Invoices for payments must be submitted by the Contractor to the agency requesting the services with sufficient detail to support payment. Invoices shall be submitted no more than monthly to [ndee.accounting@nebraska.gov](mailto:ndee.accounting@nebraska.gov). The terms and conditions included in the Contractor's invoice shall be deemed to be solely for the convenience of the parties. No terms or conditions of any such invoice shall be binding upon the State, and no action by the State, including without limitation the payment of any such invoice in whole or in part, shall be construed as binding or estopping the State with respect to any such term or condition, unless the invoice term or condition has been previously agreed to by the State as an amendment to the contract. **The State shall have forty-five (45) calendar days to pay after a valid and accurate invoice is received by the State.**

### D. INSPECTION AND APPROVAL

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

Final inspection and approval of all work required under the contract shall be performed by the designated State officials.

The State and/or its authorized representatives shall have the right to enter any premises where the Contractor or Subcontractor duties under the contract are being performed, and to inspect, monitor or otherwise evaluate the work being performed. All inspections and evaluations shall be at reasonable times and in a manner that will not unreasonably delay work.

### E. PAYMENT (Nonnegotiable)

Payment will be made by the responsible agency in compliance with the State of Nebraska Prompt Payment Act (See Neb. Rev. Stat. § 81-2403). The State may require the Contractor to accept payment by electronic means such as ACH deposit. In no event shall the State be responsible or liable to pay for any goods and services provided by the Contractor prior to the Effective Date of the contract, and the Contractor hereby waives any claim or cause of action for any such services.

### F. LATE PAYMENT (Nonnegotiable)

The Contractor may charge the responsible agency interest for late payment in compliance with the State of Nebraska Prompt Payment Act (See Neb. Rev. Stat. §§ 81-2401 through 81-2408).

### G. SUBJECT TO FUNDING / FUNDING OUT CLAUSE FOR LOSS OF APPROPRIATIONS (Nonnegotiable)

The State's obligation to pay amounts due on the Contract for fiscal years following the current fiscal year is contingent upon legislative appropriation of funds. Should said funds not be appropriated, the State may terminate the contract with respect to those payments for the fiscal year(s) for which such funds are not appropriated. The State will give

the Contractor written notice thirty (30) calendar days prior to the effective date of termination. All obligations of the State to make payments after the termination date will cease. The Contractor shall be entitled to receive just and equitable compensation for any authorized work which has been satisfactorily completed as of the termination date. In no event shall the Contractor be paid for a loss of anticipated profit.

**H. RIGHT TO AUDIT (First Paragraph is Nonnegotiable)**

The State shall have the right to audit the Contractor’s performance of this contract upon a thirty (30) days’ written notice. Contractor shall utilize generally accepted accounting principles, and shall maintain the accounting records, and other records and information relevant to the contract (Information) to enable the State to audit the contract. (Neb. Rev. Stat. § 84-304 et seq.) The State may audit, and the Contractor shall maintain, the Information during the term of the contract and for a period of five (5) years after the completion of this contract or until all issues or litigation are resolved, whichever is later. The Contractor shall make the Information available to the State at Contractor’s place of business or a location acceptable to both Parties during normal business hours. If this is not practical or the Contractor so elects, the Contractor may provide electronic or paper copies of the Information. The State reserves the right to examine, make copies of, and take notes on any Information relevant to this contract, regardless of the form or the Information, how it is stored, or who possesses the Information. Under no circumstance will the Contractor be required to create or maintain documents not kept in the ordinary course of contractor’s business operations, nor will contractor be required to disclose any information, including but not limited to product cost data, which is confidential or proprietary to contractor.

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
MJM			

The Parties shall pay their own costs of the audit unless the audit finds a previously undisclosed overpayment by the State. If a previously undisclosed overpayment exceeds three percent (3%) of the total contract billings, or if fraud, material misrepresentations, or non-performance is discovered on the part of the Contractor, the Contractor shall reimburse the State for the total costs of the audit. Overpayments and audit costs owed to the State shall be paid within ninety (90) days of written notice of the claim. The Contractor agrees to correct any material weaknesses or condition found as a result of the audit.

Appendix B

Banking Reference



usbank.com

10/10/23

RE: Bank Information Letter

STEARNS CONRAD & SCHMIDT CONSULTING  
3900 KILROY AIRPORT WAY STE. 100  
LONG BEACH, CA 90806

This memo is to confirm the following account for STEARNS CONRAD & SCHMIDT CO with U.S. Bank has been established and will be ready for you to begin using on May 30, 2023:

ABA Routing Number	122235821
Account Number	158300230394
Account Name	STEARNS CONRAD & SCHMIDT CONSULTING
UPIC	N/A
ACH Company ID	N/A
SWIFT Code	USBKUS44IMT

Sincerely,

Jim Waniss Director, Treasury Relationship Manager

A handwritten signature in blue ink, appearing to read "Jim Waniss".

## Appendix C

## Three Narrative Project Descriptions of Similar Project Work

# CITY OF LINCOLN WASTE AND RECYCLING CHARACTERIZATION STUDIES

Lincoln, Nebraska

## Client

City of Lincoln Transportation Utilities

## Contact

Karla Welding, Manager  
(402) 441-7867  
kwelding@lincoln.ne.gov

## Project Dates

2022 - 2023



## Background & Results

The City of Lincoln (City) has a history of performing material characterization studies to analyze the materials disposed and recycled from multiple generating sectors. This Study provided meaningful data to help the City make program and policy decisions to expand waste diversion initiatives and improve existing program efficiencies, such as determining the impact of a cardboard ban established in 2017.

The City contracted with SCS Engineers (SCS) in April 2022 to conduct four material characterization studies in various locations in the City of Lincoln. These locations include Curbside Recycling, Recycling Collection Sites, North 48<sup>th</sup> Street Facility, and the Bluff Road Landfill.

The characterization studies captured materials from residential, institutional, commercial, industrial, and construction and demolition generating sectors to obtain a comprehensive view of material management within the City. Over the course of the sorting events, SCS sorted 331 samples (170 physical and 161 visual). The samples that were obtained for sorting activities varied between recycling, contamination from recycling, municipal solid waste (MSW), and construction and demolition debris.

As a result of these characterization studies, SCS performed detailed analyses on these sorting events that included the following items:

- MSW composition by generating sector
- Historical comparisons of materials
- Generation rates of recyclable materials
- Contamination evaluation by City quadrant
- Potential value of recyclable commodities disposed
- Projection of MSW and recycling generation rates



# STATEWIDE MATERIAL CHARACTERIZATION STUDY

Iowa Department of Natural Resources

## Client

Iowa Department of Natural Resources

## Contact

Tom Anderson, Executive Officer II  
(515) 240-6059  
Tom.anderson@dnr.iowa.gov

## Project Dates

2017 & 2022 - Complete



## Background & Results

For two decades, the Iowa Department of Natural Resources (DNR) commissioned statewide waste characterization studies every 6-7 years. SCS was awarded the project to complete these studies in 2017 and 2022. Data from these studies have helped the DNR identify efforts to meet state and local waste reduction and recycling goals and strengthen economic development efforts and improve Iowa's overall quality of life. The data has also helped the DNR to identify and evaluate potential strategies (i.e., policies, legislation, public/private partnerships, etc.) to transition Iowa from an integrated waste management system to a sustainable materials management approach.

For both of the studies, SCS developed waste composition profiles for each of the ten host facilities, which included residential, ICI, and overall waste. SCS coordinated with the local facilities, and temporary labor companies to perform sort activities.

For both the 2017 and 2022 studies, SCS performed ten weeks of sampling and sorting activities at ten different facilities. SCS physically sorted more than 500 samples for each study. For the 2022 study, SCS also conducted a visual sort of more than 480 C&D loads.

SCS prepared a final report that included the results of each performed sort and compared the captured data to historical data. This comparison illustrates potential changes in consumer behavior and helps local, regional, and state solid waste management planners identify and target specific materials for expanded or new diversion opportunities.

SCS used the results of these studies to estimate the number of tons of reusable, recyclable, and compostable materials to provide a complete picture of diversion potential. Understanding the portion of the waste stream disposed that could be diverted through reuse, recycling, and composting is important for assessing opportunities for improved resource management.

SCS also performed an analysis using the results of the studies to estimate revenue of potentially recoverable materials, number of jobs for diverting recyclable and compostable materials, and utilized the U.S. EPA's Waste Reduction Model (WARM) to estimate carbon dioxide equivalent emissions that could be reduced from recycling materials disposed in the State.

## Final Report Links:

- 2022 Study – Final Report: [Click Here](#)
- 2022 Study – Summary Video: [Click Here](#)
- 2017 Study – Final Report: [Click Here](#)

# IOWA SUSTAINABLE MATERIALS MANAGEMENT PROJECTS

Iowa Department of Natural Resources

## Client

Iowa Department of Natural Resources

## Contact

Tom Anderson, Executive Officer II  
(515) 240-6059  
Tom.anderson@dnr.iowa.gov

## Project Dates

2021 - On Going



## Background & Results

The Iowa Department of Natural Resources (DNR) retained the services of SCS through a competitive bidding process to initiate Phase II of the Sustainable Materials Management (SMM) – Vision for Iowa initiative. This contract has been amended since with SCS to provide services for two additional projects: an Iowa Recycling Facility Study and a Landfill Material Analysis.

The purpose of these projects is to help the DNR identify potential strategies to help transition Iowa from its historical focus on end-of-life material management practices towards a more comprehensive SMM approach that seeks to conserve resources, reduce waste, slow climate change, and minimize the environmental impacts of the material we use.

The Phase II project focused on involving subcommittees and stakeholders to develop short-term strategies (0-3 years), medium-term strategies (4-10 years), and long-term strategies (11+ years) for consideration for the categories of organics and fibers, plastics, construction and demolition, and renewable energy equipment. The SCS team prepared and reviewed with the DNR to develop a final report that presents the results of research, subcommittee meetings, input, and discussions of stakeholders representing a diverse cross-section of the State, including local and state government, industry, academics, solid waste/recycling, and non-profit organizations and agencies.

The Iowa Recycling Facility Study prioritized obtaining operational information from facilities that accumulate or process recyclables in Iowa. The State does not permit or license recycling facilities, therefore the State does not have a formal system for facilities to voluntarily report this information. SCS collaborated with the DNR and stakeholders to develop a survey to collect information on accepted materials, contamination, tons managed, locations material is sent to, etc. SCS summarized this information into a report that the State or facilities in Iowa may use to increase recycling participation, decrease contamination rates, and help make recycling more accessible in Iowa.

The Landfill Material Analysis report analyzed the materials identified in the 2022 Iowa Statewide Material Characterization Study to determine the recoverability of disposed materials, potential revenue of disposed recyclable commodities, reduced greenhouse gas emissions for recycling and reuse activities, and estimated job creation for recycling and reuse activities.

## Appendix D

## Letters of Recommendation for Similar Project Work



May 16, 2023

To Whom it May Concern,

RE: Integrated Solid Waste Management Strategic Planning Services

The Iowa Department of Natural Resources (DNR) has retained SCS Engineers (SCS) for several statewide initiatives that involved sustainable materials management (SMM) strategic planning services (2020 – 2022), material characterization and analysis studies (2017 and 2022), and a recycling hub and spoke study (2016 – 2017). The results of these projects have helped identify new opportunities and strategies for advancements in how material resources are managed in Iowa. These projects were successful thanks in part to SCS' professionalism, national and local experience and expertise, exceptional communication, and their dedication and passion for their work.

The SCS team has worked effectively with our team, has developed thoughtful and comprehensive project approaches, and have demonstrated the experience and expertise necessary to develop meaningful and successful project results.

The following are summaries of the previously mentioned projects that highlight the experience and expertise that SCS brought to each project.

**SMM – Vision for Iowa (2020 – 2022)**

In late 2020, we retained the services of SCS through a competitive bidding process to help us initiate Phase II of the SMM – Vision for Iowa initiative. The purpose of this project was to build upon previously identified support for investigating transitioning Iowa from the existing solid waste management policies and infrastructure to a SMM system. SCS worked with our team to identify and recruit more than 100 stakeholders representing various industries and businesses, manufacturers and processors, warehouse and transportation companies, landfill agencies, recycling facilities, associations, and more. These individuals were recruited by SCS to participate in subcommittee and/or stakeholder meetings.

SCS coordinated and facilitated 30 subcommittee meetings and four stakeholder meetings, as well as monthly project update/strategic planning meetings. SCS facilitated these meetings, presented research results, and lead strategic planning discussions. The results of these efforts identified four priority material categories (organics and fibers, plastics, construction and demolition, and renewable energy equipment) and developed possible short, medium, and long term strategies for potential implementation.

The final report developed by SCS summarized the multi-year project in a clear and concise manner that used informative and compelling narrative and graphics. SCS is currently working with us in completing several of the strategies identified in this report.

SMM – Vision for Iowa Report: [https://www.iowadnr.gov/Portals/idnr/uploads/waste/smm\\_finalreport.pdf](https://www.iowadnr.gov/Portals/idnr/uploads/waste/smm_finalreport.pdf)

### **Material Characterization (2017, 2022)**

The DNR selected SCS through a competitive bidding process to perform material characterization studies in 2017 and again in 2022. Both studies occurred at ten waste management facilities for a period of one week at each facility. We value these studies as providing meaningful data to help the DNR and local governments in evaluating and making program/policy decisions concerning their waste management programs.

SCS worked with us and the host facilities to develop methodologies that were safe, met industry standards, accommodated host facility operations, and would allow the data to be compared to historically collected data. It was clear that the SCS team took great pride in their work in planning, sorting, data analysis, and report development activities. Their expertise and field knowledge was essential in overcoming project challenges (i.e., temporary labor, inclement weather, facility schedules, etc.) to produce consistent and reliable data results.

2022 Material Characterization Study:

[https://www.iowadnr.gov/Portals/idnr/uploads/waste/faba\\_wastecharacterization2022.pdf](https://www.iowadnr.gov/Portals/idnr/uploads/waste/faba_wastecharacterization2022.pdf)

### **Iowa Recycling Hub and Spoke (2016 - 2017)**

The DNR selected SCS through a competitive bidding process to perform the Iowa Recycling Hub and Spoke study. The purpose of the study was to inventory existing recycling operations and assess the feasibility of creating partnerships with a hub and spoke type system.

The SCS team worked with us to develop strategies to identify and survey targeted facilities and recycling programs throughout Iowa. Their thoughtful and systematic approach to contacting these facilities was efficient and led to a wealth of information. SCS evaluated the collected data and developed a conceptual hub and spoke recycling system, an interactive GIS map showing facilities and flow of materials, and an interactive cost/benefit analysis model that solid waste planners and facility managers could use to evaluate potential recycling implementation strategies.

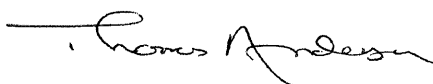
2017 Recycling Hub and Spoke Report:

[https://www.iowadnr.gov/Portals/idnr/uploads/waste/faba\\_hubandspoke\\_finalreport.pdf](https://www.iowadnr.gov/Portals/idnr/uploads/waste/faba_hubandspoke_finalreport.pdf)

Again, the DNR appreciates the work that SCS has done over the years for the state of Iowa. If you have any questions or need additional information, please feel free to contact me.

Sincerely,

Tom Anderson, Executive Officer II



Iowa Department of Natural Resources – Financial and Business Assistance

515-240-6059

[tom.anderson@dnr.iowa.gov](mailto:tom.anderson@dnr.iowa.gov)

To whom it may concern at Iowa DNR,

SCS engineering recently performed a very complex (15 collection sites and 85 waste types to be sorted during COVID) statewide waste sort for the State of Wisconsin and the result is a very useful product and data we have confidence in.

I was impressed with the SCS team and the way they organized the proposal with a clear explanation of how and why they would organize the sampling events to be as efficient as possible while still obtaining significant data. They proposed a sampling plan relative to the amount of waste accepted at the various sites and had their primary statistician available to explain the reasoning behind the number of samples proposed.

The Team at SCS is clearly skilled in their areas of expertise and made sure we were communicating through a single point of contact who was prioritizing our project timelines and needs while also providing ample opportunities to discuss with the waste sort operation lead and those who would be involved in the data analysis and communication for the project. A lot of time was spent ensuring that everyone knew the exact materials that would go into each of the 85 waste category descriptions and documenting those details.

Consistency in sampling is an area SCS excelled at. ASTM standards were used for the specific sampling protocols. SCS clearly knew these protocols well, which provides confidence in knowing that our data was gathered using a well-tested standard and is comparable to other waste characterization studies from previous years and from other communities and states. The project also included specific training proposals for onsite third-party workers and onsite leads which increased my confidence in the data collected.

SCS was also very adaptable once the proposal met the real world. In a data collection process plagued by COVID shutdowns, changing waste patterns, weather setbacks and site ownership transitions, the SCS team maintained open lines of communication to determine where adjustments to the proposed plan could reasonably be made and where project constraints needed to be adhered to absolutely.

I would suggest going through any data collection and final product requests that are specific to your project proposal early and in a lot of detail. There were some specific hand count and photo requests that did not make the draft and final report because they were not part of the ASTM standard protocols but that were part of our proposal request. I know SCS would have collected and provided these items in the final report had they been identified more distinctly as a request in addition to the regular waste sort process.

SCS's final report was well done. The writing was clear and effectively described all changes made in the field. I have confidence that questions about the details of the data will be able to be answered with the report as different data becomes more important to us in future years. The data representation in the report is clear and each of the tables and graphs can stand alone without the report writing which greatly increases its usefulness.

The primary reason I would recommend SCS for a waste characterization product is the Team's clear interest and desire to provide a product we were happy with. SCS had an extremely quick turnaround between the draft and final reports to make a lot of data analysis and comparisons that we were expecting but not explicit about in our RFP. After the final product was received and payment issued SCS has continued to answer questions in a timely manner as we present the data and to provide additional details such as raw data files.

SCS is also passionate about the value of waste characterization study results and continues to work with us locally and nationally to share the results and increase awareness for the project. Overall, they were and continue to be a pleasure to work with.

Sincerely,

Casey Lamensky

Solid Waste Coordinator  
Waste and Materials Management Program  
Wisconsin Department of Natural Resources



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January 27, 2022

SCS Engineers

Engineering Services for the Salina Kansas Municipal Solid Waste Facility

SCS Engineers has been the longstanding (10+ years) consulting engineering firm for the City of Salina Kansas for the municipal solid waste landfill the city owns and operates. Recently (November 2021) SCS Engineers performed the waste sort portion of a Solid Waste Characterization study and Recyclables Composition study for the city. These studies were in addition to the other annual engineering responsibilities that SCS Engineers performs for the city.

SCS Engineers have performed their work exceptionally well for the city in the past, and SCS Engineers has recently been renewed for another 3-year contract. The field work is complete for the Waste Characterization study and the Recyclables Composition study and we are awaiting a draft report. The planning for these studies was very detailed, organized and professional. The actual field work was completed as scheduled and with minimal disruption to our landfill operations. The waste sort included separation of materials into 7 categories broken down further into 41 materials. The recyclables sort included 6 categories broken down into 30 material types.

The City performed the waste characterization study in 2021 in order to:

- Evaluate current waste composition compared to historical results (1996-1997 and 2004);
- Develop a better understanding of the types and percentages of waste currently accepted for disposal by generator type;
- Understand waste compositions that cause the City to have a higher per capita waste generation rate than the state average;
- Determine other material waste streams that could potentially be diverted for recycling or reuse; and
- Consider modifying existing integrated solid waste management (ISWM) programs and services (including education and outreach activities) based on the data results to improve waste diversion and program participation.

In anticipation of the results from these studies, we have also contracted with SCS Engineers to analyze the data and to work with the public, our staff and the Saline County Solid Waste Management Committee to develop waste reduction strategies for our community this summer.

SCS Engineers also worked with the city to develop a grant application for the Kansas Department of Health and Environment (KDHE). This grant application was met with great enthusiasm and was approved to fund up to 40% of the study. KDHE supported the city with

Engineering ♦ Streets ♦ Traffic Control ♦ Flood Control ♦ Central Garage ♦ Sanitation ♦ Landfill



award of the grant with the intent to enable Salina's process and results to help the KDHE develop guidance on the implementation of waste characterization and recyclables composition studies to target reductions in the waste stream at municipal solid waste landfills throughout the state.

SCS Engineers are a valuable member of solid waste management team in Salina Kansas. I am confident they will perform exceptionally for others in this industry.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jim L. Kowach", with a long horizontal flourish extending to the right.

Jim L. Kowach P.E.  
Operations Manager  
Salina Kansas Public Works  
(785) 309-5750  
[Jim.kowach@salina.org](mailto:Jim.kowach@salina.org)

**Appendix E**

**Resumes of Key  
Project Personnel**

## MICHAEL J. MILLER, CHMM

### Education

M.B.A., Business Administration, University of Missouri, 2001  
B.S., Industrial Management, Arizona State University, 1994

### Specialty Certifications

Certified Hazardous Materials Manager  
Certified 40-Hour Hazardous Waste Operations Worker  
Certified Hazardous Waste Operations Site Supervisor



### Professional Experience

Mr. Miller has worked for SCS since 2005 and serves as SCS' national environmental services market leader. In this role, he oversees many of the environmental projects across the region and nationally. His environmental background includes assessment of common special concerns related to redevelopment projects specifically, asbestos, lead based paint, air permitting, and risk mitigation, monitoring and management. He has developed a wide array of environmental health and safety (EH&S) programs and implemented EH&S solutions at formerly used industrial sites to ensure project success and ensure worker safety. Mr. Miller is an expert at effectively communicating environmental liabilities to project stakeholders with regard to ongoing operations and planned projects prior to project implementation. By identification of compliance alternatives and/or corrective actions, risks are often mitigated and project implementation actions are monitored in order to avoid unnecessary added expense due to project rework that saves our client's money. Mr. Miller is well-versed in RCRA compliance and has provided compliance audit support for many types of facilities including small-quantity and large-quantity generators of hazardous waste. This experience allows Mr. Miller to be uniquely qualified in regards to waste handling and storage activities as well as waste profile preparation in advance of permitting, transport and disposal of hazardous, special and non-hazardous waste streams.

### Solid Waste

**Waste Characterization Studies:** Project Director and technical staff member for multiple MSW, C&D, and Recyclables studies including Cities of Lincoln and Omaha, Nebraska (multiple projects and multiple years) and two different state-wide projects for the Iowa Department of Natural Resources.

**Construction Plans and Specifications:** Mr. Miller has served as the Project Director for numerous landfill liner phase development projects in Nebraska. Responsible for coordinating SCS staff and assuring client timelines are met within budget, he has also provided QC review of project deliverables, assisted with preparation of engineer estimates, and provided bid review support for contractor selection.

**Construction Quality Assurance:** Mr. Miller has served as the Project Director for numerous landfill liner, closure, and gas system construction quality assurance (CQA) projects. In addition to his role coordinating SCS's staff, Mike has been principally responsible for negotiating client contracts, providing regulatory correspondence, and reviewing project deliverables.

**Regulatory Compliance Support:** Mr. Miller has provided regulatory support to landfills throughout Nebraska and the Midwest with respect to air quality, groundwater, stormwater, spill prevention,

control and countermeasure, and various other compliance matters. He has successfully negotiated regulatory complaints in support of client operations and has helped prepare numerous compliance action plans to help clients come into compliance.

## Site Assessment, Investigation, and Remediation

**Phase I Environmental Site Assessments, Multiple Facilities; Midwest:** Mr. Miller has performed in excess of 1000 Phase I Environmental Site Assessments to help assess potential environmental liabilities associated with client acquisition and divestiture activities. These assessments have been performed in accordance with the ASTM standard in place at the time of the assessment as well as most recently with the EPA All Appropriate Inquiry rule.

**Risk Based Corrective Action:** Mr. Miller served as the project manager for a preliminary assessment, Tier 1 Site Investigation, and Tier 2 Site Evaluation for a former jet fuel pipeline release site in Bellevue, Nebraska. Mr. Miller coordinated site activities with the responsible party, landowner, and regulator and directly oversaw SCS field personnel and subcontracted drilling personnel for the sampling of existing groundwater monitoring wells and installation and sampling of new groundwater monitoring wells installed as part of the Tier 1. Subsequent to the Tier 1, and Tier 2 investigation using our company owned Geoprobe was performed for the subject property to evaluate the groundwater ingestion pathway. SCS is currently evaluating the site specific target levels and developing the remedial action to address the impacted groundwater.

## Emergency Response Projects

**PCB Site Characterization and Remediation:** Mr. Miller served as the Project Manager for a remediation project completed by SCS for the Omaha Public Power District. Mr. Miller was responsible for client and regulatory communications associated with remediation activities at six substations with historic PCB contamination. Mr. Miller prepared the Work Plan, negotiated Work Plan Modifications on the clients' behalf, and identified various opportunities to reduce remediation waste disposal. Mr. Miller oversaw all environmental sampling activities, field laboratory analysis, and excavation activities for this effort. The project has been recognized by the Nebraska Industrial Council on the Environment (NICE) as the Environmental Project of the Year for 2005.

**Transformer Oil Release (Spill Response):** Mr. Miller managed the assessment and clean up of two separate oil releases that occurred at the same location. The releases were the result of vandalism and each release had a different responsible party. Mr. Miller coordinated response activities, performed sampling, and directed excavation activities. Based on sample results (PCBs), one release was managed under the EPA Spill Cleanup Policy and the other was managed as petroleum contaminated soils under the State's Integrated Waste Management rules.

**Spill Response Services:** Mr. Miller oversees SCS spill response services performed out of the Omaha office. Since 2006, spill response services have been provided to various clients (Utilities, Fuel Retailers, Sand and Gravel Operations) at over fifty different spill sites. Activities performed by Mr. Miller included initial call receipt (24 hours per day) and diagnosis, site reconnaissance and mitigative control strategy development, coordination of field equipment and manpower, cleanup activities and oversight, waste characterization, disposal coordination, and site restoration activities. As part of these spill events, Mr. Miller was responsible for all communications with the client representatives as well as the regulatory representatives; if necessary. In some cases additional follow on activities have been performed such as environmental sampling and reporting.

## Environmental Compliance

**Spill Prevention Control and Countermeasures Plan:** Mr. Miller developed an SPCC Plan for an asphalt terminal in central Nebraska with onsite storage capacity in excess of 5 million gallons. As part of this effort, Mr. Miller completed the site visit and data acquisition efforts, communicated site conditions to an SCS professional engineer, drafted the written plan, and completed the substantial harm analysis.

**Storm Water Management Plans:** Mr. Miller provided senior support for the inspections of nearly 40 waste hauling facility repair shops and transfer stations and the development of storm water management plans. As part of this effort, Mr. Miller was responsible for evaluating the need for industrial storm water discharge coverage, determining if a “no exposure” condition existed, and assuring that a “notice of intent” was submitted to the appropriate state for coverage if a permit was required.

**Environmental Reconnaissance Study:** Mr. Miller oversaw an environmental reconnaissance study of electric utility assets at Offutt Air Force Base. The purpose of this effort was to document any potential liabilities associated with the assets which were being transferred to our client as part of the base privatization effort. Mr. Miller reviewed available environmental literature related to the utility assets; reviewed prior PCB sampling results for on base transformers, performed limited sampling of utility substations for PCB contamination, and determined SPCC applicability for each substation.

**Internal Environmental Compliance Review Program:** Mr. Miller developed, implemented, and managed an area-wide internal environmental auditing program that increased visibility of the EH&S personnel, increased the credibility of EH&S initiatives, and reduced issues of non-compliance 86% in first year. This program included 185 of the highest-risk facilities and resulted in nearly 400 internal reviews each year.

**RCRA Compliance Audit:** Mr. Miller performed a comprehensive RCRA compliance audit for two galvanizing plants in Oklahoma; both which were large quantity generators of hazardous waste. Activities included a comprehensive review of recordkeeping procedures (i.e. manifesting, waste profiling, etc) for the past five years, a thorough review of onsite activities and waste handling and storage procedures, and development of findings and recommendations. The audit was performed in preparation for a State and EPA scheduled audit for which there were no issued letters of warning or notices of violation.

Reference 1:	Reference 2:	Reference 3:
City of Lincoln, NE	City of Omaha, NE	Iowa Department of Natural Resources
Karla Welding	Matt O’Connell	Tom Anderson
5101 N 48 <sup>th</sup> Street Lincoln, NE 57404	5600 S 10 <sup>th</sup> Street Omaha, NE 68107	6200 Park Ave Des Moines, IA 50321
(402) 441-7867	(402) 444-3915 ext. 1120	(515) 240-6059

JEFF PHILLIPS

## Education

University of Iowa, Iowa City, IA  
Bachelor of Arts, Geography, Environmental Studies, December 1999



## Professional Affiliations and Certifications

Solid Waste Association of North America (SWANA) Certified Landfill Manager  
SWANA Manager of Landfill Operations (MOLO) Certified Instructor  
Landfill Operator and Transfer Station Operator Certification (Iowa)  
Iowa Compost Council (IACC), Board Member

## Professional Experience

Mr. Phillips is a Project Manager who manages and performs project work primarily related to Sustainable Materials Management (SMM) such as program, services, and facility assessments, community engagement and outreach, training, and strategic planning. He has more than 23 years of experience in the Midwest overseeing solid waste management projects for municipalities, solid waste agencies, and both private and public entities.

Mr. Phillips has assisted clients across the Midwest in evaluating their environmental programs and services, reviewing and developing metrics to track and measure program success, and helps lead clients through strategic planning and community outreach and engagement activities to identify priorities and solutions.

Mr. Phillips has performed or supervised material characterization studies at more than 25 facilities in four states. In the past two years, Jeff has performed or supervised material characterization studies at more than 10 facilities, including the 2022 Iowa Statewide Material Characterization Study.

Mr. Phillips has completed more than 17 solid waste management plans in the past five-years. These comprehensive planning services includes evaluating historical solid waste management program data, facility and equipment utilization, performing community surveys and presentations, facilitating public strategic planning sessions, developing and performing community engagement and education activities, and developing and presenting recommendations. Recommendations included timelines, responsibilities, and estimated implementation costs.

Mr. Phillips has also developed unique community engagement and outreach activities that include solid waste service and program videos, interactive survey activities, listening tours, and vision casting sessions. These tools are used to help connect and interact with stakeholders and under-represented and disadvantaged communities.

## Material Characterization Services

**Waste and Recyclable Materials Characterization Study, Salina, Kansas.** Project Manager responsible for developing a work plan to perform physical and visual sorts on identified materials, coordinating with labor staffing agencies, participating in sorting activities (100 samples), and assisting with the development of the final report.

**Statewide Material Characterization Study, Iowa Department of Natural Resources, Iowa.** Project Manager responsible for developing ten separate work plans to perform physical and visual sorts on identified materials, coordinating with labor staffing agencies and host facilities, evaluating collected data (nearly 1,000 samples), and assisting with the development of the final report.

**Waste and Recyclable Materials Characterization Study, Lincoln, Nebraska.** Project Manager responsible for developing five separate work plans to perform physical and visual sorts on identified materials covering curbside recycling and drop-off recycling materials, construction and demolition debris at two landfills, municipal solid waste disposed at a landfill and at a transfer station, coordinating with sorting staff, host facilities (municipally and privately owned), evaluating collected data, and assisting with the development of the final report.

**Goodwill of the Heartland Material Characterization for Unsold Materials, Cedar Rapids, Iowa.** Project Manager responsible for developing a work plan to collect samples from four separate facilitating and performing physical sorts on identified materials, coordinating with client staff, participating in sorting activities, and assisting with the development of the final report.

**Various Visual Material Characterization Studies, Iowa Landfills.** Project Manager responsible for developing work plans to perform visual sorts of identified materials, coordinating with host facilities, evaluating collected data, and developing and presenting final report to clients.

## Planning Services

**Statewide Sustainable Materials Management Planning, Iowa Department of Natural Resources, Iowa.** Project Manager responsible for developing and recruiting project participants representing various industries to participate as stakeholders and subcommittee members, facilitating strategic planning sessions, developing on-line engagement and planning activities, researching material management policies, coordinating with project partners to review life cycle analysis data, developing and implementing recycling facility surveys, researching textile management practices, coordinating with stakeholders and state staff to develop short, medium, and long-term implementation recommendations, and developing a final report.

**Waste Diversion Metric Evaluation, Missouri Department of Natural Resources, Jefferson City, Missouri.** Project Manager responsible for evaluating waste diversion and recycling metrics used by other states, reviewing methods entities use to obtain and evaluate performance data, assessing existing metric methods used in Missouri, identifying key priorities for the state, developing recommended metrics for the state to consider for implementation, and presenting project results to the Missouri Solid Waste Advisory Board (SWAB) and at the Missouri Waste Control Coalition (MWCC) conference.

**Compost Operations and Facility Planning, Iowa City, Iowa.** Project Manager responsible for performing site and operational observations, collecting and evaluating historical operational and program data, surveying customers of the facility to assess desired modifications, facilitating strategic planning sessions with City staff and operators, and developing facility and operation modification recommendations.

**Solid Waste Management Plan, Northwest Iowa Area Solid Waste Agency, Sheldon, Iowa.** Project Manager responsible for evaluating historical and current integrated solid waste management programs and services, performing community program satisfaction surveys, facilitating strategic planning sessions, and developing a solid waste management plan that includes implementation activities and timelines for the next five years.

**EMS Program Evaluation and Recommendations, Harrison County Landfill Commission, Logan, Iowa.** Project Manager responsible for evaluating the previously identified Environmental Management System objectives and targets, reviewing progress and metrics for identified activities, and developing recommendations for continued program improvement.

**Collection System Study, City of Marion, Iowa.** Project Manager responsible for coordinating with staff to obtain collection program data, facilitating strategic planning meetings, overseeing development of financial and service scenario model, presenting results to City staff and City Council, assisting City with transition from manual collection services to automated collection services, developing transition tasks and schedules, developing recommendations for cart sizes and service frequency, creating education and outreach messaging, identifying cart procurement specifications, and developing recycling cart grant application.

**Route Optimization Services, City of Davenport, Iowa.** Project Manager responsible for obtaining and evaluating historical collection program data, performing time and motion study, surveying collection crews concerning existing routes, coordinating with contractor in evaluation of existing route performance and development of improvement recommendations, developing final report, and presenting results to client.

**Recycling Program Evaluation and Processing Contract Development, City of Mason City, Iowa.** Project Manager responsible for evaluating existing recyclable material collection and processing services, interviewing collection and processing facility staff, performing time motion studies, and working with City staff to develop recommended material processing contract language.

**Recycling Facility Evaluation, Buena Vista County Solid Waste Commission, Storm Lake, Iowa.** Project Manager responsible for obtaining and evaluating historical program data, observing operations, interviewing operational staff, assessing existing facility and processing equipment, coordinating with industry equipment vendors to develop processing solutions, contacting regional material processors and transportation companies, evaluating various potential operational scenarios and financial models, developing recommendations, presenting results to client.

<b>Reference 1:</b>	<b>Reference 2:</b>	<b>Reference 3:</b>
City of Lincoln, NE	Iowa Department of Natural Resources	City of Salina, KS
Karla Welding	Tom Anderson	Jim Kowach
5101 N 48 <sup>th</sup> Street Lincoln, NE 57404	6200 Park Ave Des Moines, IA 50321	300 W. Ash St. Salina, KS 67401
(402) 441-7867	(515) 240-6059	(785) 309-5725



## BRENT DIELEMAN, S.C.

### Education

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



### Specialty Certifications

Zero Waste Total Resource Use and Efficiency (TRUE) Advisor, Green Building Certification Institute (GBCI)

### 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. Brent Dieleman is an SCS Project Manager and certified TRUE Advisor with 19 years of solid waste planning experience, including 15 years managing and directing waste characterization studies and audits. His planning experience includes evaluating current solid waste infrastructure (including organic management technologies), developing zero waste plans, engaging stakeholders, conducting public education and recycling, technical assistance, measuring recycling contamination, and researching industry trends.

A representative sampling of Brent's relevant project experience is provided below.

### Waste Characterization Studies

Within the past five years, Brent has managed the following projects:

**Wisconsin Statewide Waste Characterization Study, WI.** Brent served as the technical project manager to complete this study which characterized over 600 random samples of disposed MSW and C&D at 15 solid waste facilities throughout the State. For over five weeks, Brent was the onsite project manager directing staff to complete the fieldwork which included training staff, quality control, and adherence to the Health and Safety Plan for each site. Brent led the data analysis and development of the final report.

**Iowa Statewide Waste Characterization Study, IA.** Brent was the project manager to complete the State of Iowa's 2017 Statewide Waste Characterization Study. He coordinated and led training for the project's multi-crew 10-week field event. This study characterized about 500 random samples of disposed municipal solid waste from 14 publicly owned host facilities. Brent led the data analysis and development of the final report which included an economic analysis.

**Alameda County (StopWaste), MSW, Recycling, and Organics Characterization Study, CA.** Brent coordinated and led the training of a multi-crew field effort to acquire and sort over 600 samples at 10 host sites to characterize MSW, recycling, and organics from residential and commercial sources in 14 cities and 2 solid waste districts.

**Sonoma County, Waste Characterization Study, CA.** Brent led field activities for the County’s two-season waste characterization study which included acquiring and sorting 100 residential samples and 150 commercial samples from specialized routing to targeted industry groups including retail, office, education/healthcare facilities, restaurants/food service establishments, and lodging.

**Miami-Dade County, Recyclable Material Contamination Study, FL.** 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 study results provided the County with important information used to design education and outreach programs. The study was unique because it measured the impact of recycling contamination on acceptable program recyclable materials.

**Huntsville Solid Waste Disposal Authority, MSW, Recycling, and C&D Characterization Study, AL.** Brent managed this comprehensive characterization study to assess the types and quantities of materials in the County’s MSW, recycling, and C&D streams. The study was also designed to understand the changes in waste stream composition from the previous 2013 study. A total of 130 material samples were characterized as part of this study.

**Broward County, FL, MSW, Recycling, and C&D Characterization Study, FL.** Brent designed and led field activities for the County’s four-season waste characterization study which included 150 samples of MSW, 50 samples of source-separated recyclable materials, and 280 samples of construction/demolition debris and bulky waste. The study targeted waste generated from both the residential and commercial generating sectors.

Waste Characterization Studies managed by Brent before 2019 include:

- Orange County, FL
- City of Chula Vista, CA
- City of Sausalito, CA
- Huntsville, AL
- Prince George’s County, MD
- Montgomery County, MD
- Wake County, NC
- Santo Domingo, Dominican Republic
- City of Gurugram, India (through U.S. EPA)
- City of Naucalpan, Mexico (through U.S. EPA)
- College of Charleston, SC
- George Washington University, Washington, DC

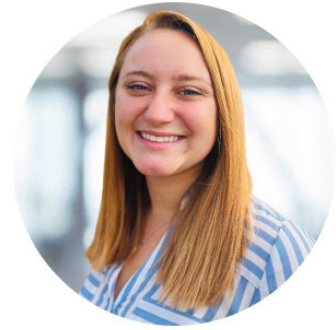
<b>Reference 1:</b>	<b>Reference 2:</b>	<b>Reference 3:</b>
Iowa Department of Natural Resources	City of Salina, KS	Montgomery County, MD
Tom Anderson	Jim Kowach	Raycharn Liou
6200 Park Ave Des Moines, IA 50321	300 W. Ash St. Salina, KS 67401	101 Monroe Street, 6 <sup>th</sup> Floor Rockville, MD 20850
(515) 240-6059	(785) 309-5725	240-777-6428

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## HANNAH SPERFSLAGE

### Education

IOWA STATE UNIVERSITY  
BS Global Resource Systems & Environmental Studies,  
Minor: Biology, Iowa State University, 2021



### Skills

Language Proficiencies: Spanish (limited working proficiencies)  
ArcGIS/ArcGIS Online  
ESRI software

### Certifications and Affiliations

Certified Transfer Station Operator

### Professional Experience

Ms. Hannah Sperfslage is a Staff Professional who assists and performs project work focused on Sustainable Materials Management (SMM). Ms. Sperfslage has assisted clients across the Midwest in evaluating their current solid waste management programs and services. She has over two years of experience that includes providing training materials, overseeing waste and recycling characterization studies, analyzing solid waste facilities, completing permit renewals, and performing comprehensive planning activities.

Hannah is passionate about engaging with clients to create a collaborative space to encourage waste diversion and better waste management practices. This includes holding stakeholder and community engagement sessions to present current operations, communicate results and plans. Ms. Sperfslage has also performed various analyses on findings of material characterization studies for items such as economic, recoverability, and emissions evaluations to capture a holistic view of waste management practices.

### Iowa Solid Waste Management Plans

Ms. Sperfslage has completed or is currently involved in 6 comprehensive plans in various locations in Iowa. Solid waste comprehensive planning is required by the Iowa Department of Natural Resources to be completed by each Planning Area every 5 years. The activities associated with comprehensive planning include evaluating satisfaction of current programs through community surveys, utilizing historical data, facilitating public meetings to perform vision casting and strategic planning, and presenting recommendations. These comprehensive plans engage municipalities, counties, and solid waste agencies to track historical progress, select program priorities, and provide implementation timelines that include tasks and waste diversion impacts.

### **Recycling Facility Study, Iowa**

In the state of Iowa, recycling facilities that accept and process recycling are not permitted. The Iowa Department of Natural Resources contracted with SCS Engineers to perform a Recycling Facility Study to obtain information regarding recycling activities such as materials accepted, contamination rates, identify locations material is accumulated and/or processed, etc.

Ms. Sperflage contacted and engaged with all identified facilities to obtain complete results. She also performed the data analysis on the survey results involving consolidating all survey information to capture a general understanding of recycling in Iowa that includes tons of material accumulated and processed, average contamination rates, and common materials accepted and processed. Additionally, Ms. Sperflage assisted in the creation of an interaction map of identified facilities with high-level recycling information to be utilized on the DNR's website.

### **Landfill Material Analysis, Iowa**

The Iowa Department of Natural Resources retained SCS Engineers to complete a landfill material analysis based on information from the 2022 Iowa Statewide Material Characterization Study. This analysis was to replicate similar analyses performed as a part of the 2017 Iowa Statewide Waste Characterization Study.

Ms. Sperflage performed the analyses for this project including recoverability of disposed materials, greenhouse gas emissions reduction, potential job creation through recycling and reuse of materials, and estimated revenue of disposed materials. These analyses were executed in a manner to provide comparability to 2017 and utilize information to identify opportunities for new or expanded diversion programs and aid in development of recycling markets.

### **Goodwill of the Heartland Material Characterization Study, Cedar Rapids, Iowa**

The Goodwill of the Heartland (Goodwill) in Cedar Rapids, Iowa contracted with SCS Engineers to sort and characterize unsold donations from four retail stores. SCS evaluated a total of 13 samples over two days. The data was analyzed to determine opportunities for new markets and to develop a baseline for future characterization studies for Goodwill.

Ms. Sperflage was the Site Manager and trained personnel to identify each material, performed the weighing of each category, and captured ample visuals for training material. Additionally, Ms. Sperflage performed the data analysis and report writing from the composition of material physically sorted and on visual furniture data from each facility.

### **StopWaste Waste, Recyclables, and Organics Characterization Study, Alameda County, California**

Alameda County Waste Management Authority retained SCS Engineers to execute a multi-season waste, recyclables, and organics characterization study to determine opportunities for diversion, measure contamination in recycling and organics collection, and compare to historical characterization studies.

Ms. Sperflage served as the Sorting Manager for the first week of the characterization, training both internal and external employees on over 70 material categories and procedures for collection and weighing of samples.

### **City of Lincoln, Nebraska Waste Characterization Study, Lincoln, Nebraska**

The City of Lincoln, Nebraska appointed SCS Engineers to execute a waste characterization study at the municipally owned landfill in Lincoln. The Study was 1 weeklong and comprised of a visual bulky waste characterization and a physical MSW characterization. The objective of the study was to

provide the Client data in which programs and legislation can be reviewed for effectiveness. Furthermore, the study was performed in a manner to aid in comparability to previous waste characterization studies.

Ms. Sperflage served as the Site Manager for the weeklong characterization, overseeing the quality assurance of collected data and the safety of all members involved. She managed the collection, sort, and weighing of all 50 physically sorted samples. Ms. Sperflage continued to contribute to the project with data analysis and final report writing.

#### Iowa Statewide Material Characterization Study, Iowa

The Iowa Department of Natural Resources retained SCS Engineers to perform the 2022 Iowa Statewide Material Characterization Study. This study is completed regularly to develop a better understanding of the types and quantities of waste materials disposed. The 2022 study included 10 host facilities across the state of Iowa and resulted in a total of 501 MSW samples manually characterized and 486 construction/demolition debris visually screened. MSW samples included waste from residential, institutional, commercial, and industrial generators.

Ms. Sperflage was the Site Manager who led field activities at all 10 host facilities, overseeing physical and visual sorts, confirming the safety of field personnel, coordinating with staff of each host facility, and facilitating quality control of data collection. MSW samples were physically sorted into 84 material components. Ms. Sperflage trained field personnel to identify each material category and recorded the weights of each sample. Upon conclusion of the fieldwork, Hannah completed data analysis and drafted the final report.

#### City of Salina, Kansas Waste and Recyclable Materials Characterization, Salina, Kansas

The City of Salina, Kansas (City) retained SCS Engineers to perform waste and recyclable material characterization sorts to comprehend the composition of waste and recyclables being disposed of. This project physically sorted 50 municipal solid waste samples, 25 recyclable material samples, and performed visual observations for 25 construction and demolition samples.

Ms. Sperflage aided in the physical sorting of 50 MSW samples and 25 recyclable samples. She provided team leadership skills to the sort team, as well as knowledgeable answers to questions on materials being sorted.

Reference 1:	Reference 2:	Reference 3:
City of Lincoln, NE	Iowa Department of Natural Resources	City of Salina, KS
Karla Welding	Tom Anderson	Jim Kowach
5101 N 48 <sup>th</sup> Street Lincoln, NE 57404	6200 Park Ave Des Moines, IA 50321	300 W. Ash St. Salina, KS 67401
(402) 441-7867	(515) 240-6059	(785) 309-5725

Douglas B. Tangeman

### Education

B.S. Biochemistry, University of Nebraska, December 2008  
B.S. Chemical Engineering, University of Nebraska, May 2010



### Professional Licenses and Specialty Certifications

40-Hour Hazardous Waste Operations Training (HAZWOPER)  
OSHA and NFPA 472 Hazardous Materials Technician

### Professional Affiliations

Nebraska Industrial Council on the Environment (NICE), Associate Member

### Professional Experience

Mr. Tangeman serves as a Project Manager at SCS's Omaha office and has more than nine years' experience with SCS, and 14 years total in the environmental field. His experience includes five years in the regulatory field as an Air Permitting engineer and compliance inspector for the Lincoln-Lancaster County (Nebraska) Health Department (LLCHD) with his subsequent tenure as the lead air quality compliance and groundwater monitoring consultant for SCS's Omaha office. As a Project Manager, Doug manages environmental services projects including Clean Air Act Title V permitting and reporting, compliance evaluations, Tier 2 landfill gas site investigations, landfill gas wellfield monitoring and balancing, surface emissions monitoring, NSPS and NESHAP applicability analyses and reporting, and emissions inventories, multi-media compliance audits, noise studies, lead and asbestos abatement and Phase I investigations. Mr. Tangeman additionally serves in SCS's solid waste and groundwater monitoring practice and has nearly a decade of experience preparing groundwater sampling and analyses plans, conducting field sampling, and preparing comprehensive groundwater monitoring reports. Mr. Tangeman has broad experience specific to addressing landfill compliance needs and currently serves as SCS's lead air and groundwater compliance consultant for several municipally-owned and private landfills in the Midwest. Mr. Tangeman's project specific experience includes the following:

#### Solid Waste

**City of Lincoln, Nebraska Waste Characterization Studies, Lincoln, Nebraska:** The City of Lincoln, Nebraska appointed SCS Engineers to execute municipal solid waste (MSW), construction and demolition (C&D) waste and transfer station characterization studies at municipally owned landfills and a transfer station in Lincoln. The Studies were each 1 to 2 weeks long and comprised of a visual bulky waste characterization and a physical MSW characterization. The objective of the studies were to provide the City with data in which programs and legislation can be reviewed for effectiveness. Furthermore, the studies was performed in a manner to aid in comparability to previous waste characterization studies.

Mr. Tangeman served as the lead field characterization supervisor for each of the studies. He was solely responsible for the performance of field waste collection and characterization for the C&D and transfer station waste collections and was responsible for the selection of representative sample collection for the MSW characterization. Mr. Tangeman continued to contribute to the project with data analysis and final report writing.

**Landfill Air Quality Compliance:** Mr. Tangeman has been the lead air quality specialist for SCS Engineer's Omaha office and has extensive experience with supporting regulated facilities, and in particular, municipal solid waste landfills, with complying with applicable air quality regulations. This experience covers a range of compliance aspects from completing field evaluations, preparing permit applications, preparation of required reports, the conducting air quality modeling. Mr. Tangeman is also the primary author of Title V renewal applications, periodic compliance reports, Tier 2 work plans, LandGEM analyses, NSPS and NESHAP compliance, and emission inventories.

**Landfill Gas Collection and Control:** Since 2019, Doug has managed the SCS Omaha offices' landfill gas collection and control practice including the performance of monthly and on-demand gas sampling and monitoring, data analysis, wellfield adjustments, and regulatory correspondence. These duties including the performance of field activities associated monthly monitoring at several Nebraska landfills, monitoring for offsite gas migration, preparation of routine and non-routine reports and requests to regulators, and data analysis and client recommendations.

**Groundwater Monitoring:** Performs and manages projects at nearly a dozen landfills conducting semi-annual groundwater monitoring as required by Nebraska Title 132 Solid Waste Regulations. These include the Bluff Road and North 48<sup>th</sup> Street landfill in Lincoln, Waste Connections-owned landfills at Butler County, G&P, Geneva, and L.P. Gill, the Northeast Nebraska Solid Waste Coalition landfill near Clarkson, and the Douglas County State Street landfill. Mr. Tangeman was responsible for well purging, sample collection and appropriate documentation. Following receipt of the analytical results, Doug provides geological support related to the groundwater monitoring report which is later submitted to the Nebraska Department of Environmental and Energy (NDEE).

## General Environmental

**Multi-media Compliance Audits:** Mr. Tangeman has led several multi-media compliance audits at industrial facilities across 9 different states and through 5 different EPA jurisdictions. Multi-media audits, and subsequent corrective action support, included air, waste, and water programs and included review of Title V air permits, Spill Prevention Control and Countermeasure Plans (SPCC), Stormwater Pollution Prevention Plans (SWPPs) and NPDES compliance, hazardous waste generator compliance, recordkeeping, and reporting; Tier II and Form R Reporting, and Risk Management Planning as required under the Clean Air Act. For each audit, Doug was responsible for team preparation and review of site documents, development of the State-specific audit protocols, coordination of daily site activities, and leading the entrance, exit, and daily report briefings to plant personnel, corporate environmental and legal personnel, and external legal counsel.

**Spill Response Services, Various Clients:** Mr. Tangeman is part of the SCS spill response service team located in the Omaha office. Since 2006, spill response services have been provided to various clients (Utilities, Fuel Retailers, Sand and Gravel Operations) at more than 1000 different spill sites throughout Eastern Nebraska and Western Iowa. Activities performed include initial call receipt (24 hours per day) and diagnosis, site reconnaissance and mitigative control strategy development, coordination of field equipment and manpower, cleanup activities and oversight, waste characterization, disposal coordination, and site restoration activities. As part of these spill events, Mr. Tangeman is responsible for communications with the client representatives as well as the regulatory representatives; if necessary. In some cases additional follow on activities have been performed such as environmental sampling, reporting, and remediation system design, installation, and O&M.

**Noise Studies and Abatement:** As both part of the SCS team and with the LLCHD, Mr. Tangeman has been the lead investigator for clients seeking to address noise pollution from industrial sources and

perform noise studies to verify construction standards are met. Projects include performing the verification of Sensitive Compartmented Information Facility (SKIF) noise reduction requirements during the construction of the U.S. Department of Defense's Stratcom Replacement Building located at Offutt Air Force Base, study design and performance to reduce landfill gas vacuum blower noise to industrial noise at residences, and verification of code compliance of industrial activities.

## Air Quality

**Air Quality Compliance.** Mr. Tangeman has provided comprehensive Air Quality compliance support for SCS clients through the United States. Doug air quality compliance clients include the Metropolitan Utilities District (MUD), the City of Omaha's water and natural gas utility, Lincoln Water Systems (LWS), the City of Lincoln's water and wastewater utility, the Omaha Airport Authority, Learjet, Inc, and Waste Connections, Inc. Mr. Tangeman manages Air Quality regulatory applicability and compliance determinations, compliance gap analyses, regulatory notifications and compliance deadline extensions, air dispersion modeling, permit application preparation, emission control engineering cost estimates, performance of emission rate testing, and preparation of air quality reports and records.

**Air Quality Monitoring.** Mr. Tangeman has completed numerous indoor and outdoor air quality assessments as an Environmental Engineer. Clients include Omaha Steel, the United States Postal Office, City of Lincoln, Nebraska, City of Lincoln Police Department, City of Waverly, Nebraska, Lancaster County, Nebraska, Lincoln Fire and Rescue, and private businesses and citizens. Assessment activities consist of visual inspection for mold, sampling suspected asbestos-containing materials, ambient air monitoring for particulates, carbon monoxide, radon, volatile organic compounds, ammonia, hydrogen sulfide, and noise. Additional duties include preparing work plans, preparing assessment reports, and conducting post-remediation inspections.

**Air Quality Site Inspection and Evaluation.** Mr. Tangeman served as an Environmental Engineer for the Lincoln-Lancaster County (Nebraska) Health Department's Air Quality Inspection Program for five years. Mr. Tangeman conducted numerous periodic inspections of facilities which are subject to federal, state, and local air quality regulations. Responsibilities included preparing inspection plans, conducting site visits, reviewing records, performing visual monitoring tests, and preparing inspection reports.

Reference 1:	Reference 2:	Reference 3:
City of Lincoln, NE Karla Welding	Omaha Airport Authority, NE Trevor Tonniges	Metropolitan Utilities District, NE Matt Pelton
6001 Bluff Road Lincoln, NE 68517 (402) 441-7867	4501 Abbot Drive Suite 2300, Omaha, NE 68110 (402) 661-8000	7350 World Communications Drive Omaha, Nebraska 68122-4041 (402) 504-0899



## STACEY TYLER DEMERS, LEED® AP

### Education

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

### Professional Licenses

Leadership in Energy and Environmental Design (LEED®) Accredited Professional

### Professional Affiliations

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

### Professional Experience

As an SCS Vice President and Project Director, Stacey Demers has 30 years of experience in the solid waste industry and has advised, directed, or managed most of SCS's waste characterization studies conducted in the past 25 years. She is a LEED® Accredited Professional with a BS in Statistics. Stacey has strong analytical skills and field program design experience. She has directed many large waste composition studies that have characterized MSW, source-separated recyclables, source-separated organics, C&D, MRF residuals, and organic processing residuals. Stacey has worked with municipalities and private industry on a variety of solid waste management planning elements related to the composition of the targeted waste stream.

A representative sampling of Stacey's relevant project experience is provided below.

### 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; evaluate material recovery facility performance, evaluate processing technology, and manage construction/demolition debris.

Stacey is the 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, anaerobic digestion facilities, and other waste processing technologies. She oversees all phases of project management, fieldwork, data analysis, and final deliverables. Recent projects completed in the past five years are detailed below.

**State of Iowa, Statewide Waste Characterization Study, IA.** Stacey was the Project Advisor and Project Director for two studies with extensive field sampling, data analysis, and presentation of findings.

**State of Wisconsin, Statewide Waste Characterization Study, WI.** Stacey was the Project Advisor for field sampling, data analysis, and presentation of findings. This study included over 600 samples of MSW and C&D at 15 solid waste facilities throughout the State.



**State of New Jersey, Statewide Waste Characterization Study, NJ.** Stacey was the Project Director for a four-season field effort that characterized residential curbside recycling, residential MSW, and commercial MSW from urban, suburban, and rural areas of the state.

**ReGen Monterey, MSW Characterization Study, CA.** Stacey was the Project Manager for a one-season, four-week field effort that characterized residential and commercial MSW and visually characterized C&D. Results will be used to plan for recent state legislation on organics diversion.

**ReGen Monterey, Recycling Characterization Studies, CA.** Stacey was the Project Manager for four annual studies, each collecting 200 samples of recyclables stratified by originating jurisdiction and hauler. Data analysis and presentation of findings regarding contamination supported operational adjustments to adapt to the China National Sword policies in 2018 and the global pandemic in 2020.

**Alameda County (StopWaste), MSW, Recycling, and Organics Characterization Study, CA.** Stacey was the Project Manager for a comprehensive assessment of MSW, recycling, and organics. The assessment involved collecting and sorting 679 samples of MSW, recyclables, and organics at 10 facilities. This project also assesses organic processing residuals. The results of this study will be compared to recent statewide studies and previous studies conducted by the County to better understand waste trends and inform policies and programs.

**Miami-Dade County, Recyclable Material Contamination Study, FL.** Stacey was the Project Director for field sampling, data analysis, and the presentation of findings for a comprehensive assessment of residential curbside recycling composition. Findings supported the County's contract negotiations with a private MRF and informed education and outreach programs.

**Huntsville Solid Waste Disposal Authority, MSW, Recycling, and C&D Characterization Study, AL.** Stacey was the Project Director for a one-season field effort that characterized residential and commercial MSW, residential recycling, and visually characterized C&D.

**Southeastern Public Service Authority (SPSA), Waste Characterization Study, VA.** Stacey was the Project Director for field sampling, data analysis, and the presentation of findings for residential and commercial MSW from two regional communities.

**City of San Jose, MRF Residual and Inbound Curbside Recycling Characterization Studies, San Jose, CA.** Stacey was the Project Director for multiple studies to assess MRF residuals to assess contracted MRF's compliance with processing requirements. Two large-scale assessments of inbound residential curbside recycling were included to assess contamination and inform public education efforts.

**Broward County, MSW, Recycling, and C&D Characterization Study, FL.** Stacey was the Project Director for field sampling, data analysis, and the presentation of findings for residential and commercial MSW, recycling, and C&D and bulky waste. Information from this study will be used to identify the infrastructure needed to manage waste materials for the next 20 years.

**Sonoma County, Waste Characterization Study, CA.** Project Director for field sampling, data analysis, and presentation of findings for residential and commercial MSW. The study included an in-depth analysis of commercial waste by industry group: retail, office, education/healthcare facilities, restaurants/food service establishments, and lodging, recycling, and C&D and bulky waste.

**Montgomery County, Waste Characterization Studies, MD.** Stacey was the Project Director for multiple, four-season studies that performed field sampling, data analysis, and the presentation of findings for residential and commercial MSW,

**Pitkin County, Waste Characterization Study, CO.** Stacey was the Project Director for a one-season field effort that characterized residential and commercial MSW, and also visually characterized C&D delivered to the county landfill.

**Buncombe County, Waste Characterization Study, NC.** Stacey was the Project Director for field sampling, data analysis, and the presentation of findings for residential and commercial MSW. Findings supported the Waste Diversion Strategy also developed by SCS.

**Horry County, Waste Characterization Study, SC.** Stacey was the Project Director for field sampling, data analysis, and presentation of findings for residential and commercial MSW.

**Howard County, Organics Composition Study, FL.** Stacey was the Project Director for field sampling, data analysis, and presentation of findings for the residential organics program.

**City of Santa Cruz, Waste Characterization Study, CA.** Stacey was the Project Director for two-seasonal field samplings, data analysis, and presentation of findings for residential and commercial MSW.

Waste Characterization Studies managed or directed by Stacey before 2019 include:

- Culver City, CA (2018)
- Alameda County, CA (2018)
- Union City, CA (2016)
- City of Santa Monica, CA (2016)
- Prince George’s County, MD (2015)
- Proctor and Gamble Headquarters, Cincinnati, OH (2015)
- City of Chula Vista, CA (2015)
- Chittenden Solid Waste District, VT (2015)
- University of Maryland (2015, 2013, 2014, 2009, 2008, 2002)
- Anne Arundel County, MD (2014, 2010, 2005, & 1999)
- Wake County Public Schools (2014)
- 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)
- The Tower Companies, Washington, DC and Rockville MD (2008)
- U.S. Pentagon (2007)
- 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)
- Naval Security Station (1994)
- Onondaga County, NY (1994)

<b>Reference 1:</b>	<b>Reference 2:</b>	<b>Reference 3:</b>
Monterey Regional Waste Management District, CA	Alameda County, CA	Montgomery County, MD
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