Proposal:

RFP #951 - Organics Management Plan

Submitted to:

City of Ann Arbor
c/o Customer Service
301 East Huron Street
P.O. Box 8647
Ann Arbor, Michigan 48107

Submitted by:

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In affiliation with:

PROJECT INNOVATIONS INCORPORATED

Lake Research Partners

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PROFESSIONAL QUALIFICATIONS

CB&I Environmental and Infrastructure, Inc. (CB&I), in conjunction with Project Innovations, Inc. (PI) and Lake Research Partners (LRP), is pleased to provide this proposal to the City of Ann Arbor to assist with the development of an Organics Management Plan. The combined capabilities of CB&I, PI, and LRP bring a broad range of experience and expertise to meet the needs of the City of Ann Arbor, providing the following benefits:

- **We are experienced in planning and implementing a range of organics management technologies.** CB&I has designed, permitted and constructed some of the largest compost facilities in the Great Lakes area, including developing operating plans and design features to facilitate the management of organics beyond traditional landscape waste materials. We have also completed feasibility analyses of emerging technologies to manage organic materials, including in-vessel composting and anaerobic digestion. We understand the infrastructure needs and operational constraints associated with organics management across the country, and we will bring this diverse knowledge to the City's project.

- **We have vast experience in the programming and implementation of solid waste programs and facilities.** CB&I has worked with local governments facing significant changes to their historical waste management operations to design and implement strategies that are effective, sustainable, and aligned with the unique objectives of the jurisdiction. Implementation of any new or expanded services require consideration of the impact on the overall solid waste system to maintain integrated solid waste operations; this will be particularly important in Ann Arbor as the City has established a number of both publicly-provided and public-private partnership services for the management of its waste and diverted materials. CB&I's integrated solid waste planning, programming and implementation experience will be beneficial in identifying realistic, implementable recommendations for the City Council's consideration.

- **Our project team includes a number of experts in public engagement and facilitation, ensuring a robust public involvement process can be successfully employed to inform the Organics Management Plan.** Nearly every solid waste project with which CB&I is engaged includes elements of public involvement. Our planning processes often include public meetings or the formation of advisory committees and stakeholder groups to secure broad input into plan recommendations. When developing facilities to support plan implementation we often participate in public meetings or public hearings to secure necessary local approvals. We are also frequently engaged in the development and delivery of solid waste training courses for state and national groups. To augment the capabilities of our project team in this area, CB&I has partnered with Project Innovations, a local public engagement firm with extensive experience particularly in Ann Arbor building consensus around sensitive issues. We have also included Lake Research Partners, a public opinion research firm, as a member of the project team to perform a scientific survey of residents and identify their satisfaction with current organics management options and interest in or support of recommendations that may be considered during the development of the Organics Management Plan. The robust capabilities of our project team in the area of public engagement is essential to the development of a plan that is implementable and backed by the community.

Company Overview

CB&I was founded in 1889 as the Chicago Bridge & Iron Company. Today CB&I is a publicly traded, multi-disciplinary engineering and construction company offering a world of solutions to our customers in the waste management, energy, natural resources, environmental, and infrastructure markets. With 125 years of experience and the expertise of approximately 55,000 employees, CB&I provides solutions to some of the most complex and challenging problems in the world. Though we are a large firm and bring extensive resources to address the needs of the City of Ann Arbor, our solid waste practice group is client-focused and the City will receive dedicated service from the key members of our project team.

CB&I Environmental & Infrastructure, Inc. is a wholly-owned subsidiary of CB&I and is one of the largest providers of integrated solid waste services in the U.S. Our clients include local, state, and federal governments, private sector industries, and other institutions. CB&I integrates traditional solid waste planning, engineering and consulting with construction, operations and maintenance, and equipment fabrication, bringing the industry's most complete solutions to our clients. With more than 45 years of experience in the solid waste field, we have the experience and capability to provide in-house support to our clients throughout all phases of a project, from initial planning through design and construction.

Within the area of solid waste, CB&I provides full service planning and design services, including:

- Waste Generation and Disposal System Analyses
- Economic and Feasibility Analyses
- Procurement Services
- Solid Waste Plans and Plan Updates
- Waste Reduction and Diversion Planning and Program Implementation
- Public Education and Outreach
- Host Agreement Negotiations / Evaluations
- Expert Witness Testimony / Public Hearings
- Conceptual Facility Design (Landfills, Transfer Stations, MRFs, Composting, Drop-Offs)
- Local Siting / Zoning Approval and State Permitting

CB&I understands the vital role that local governments have in planning for the solid waste needs of residents and businesses. Our understanding of local government has positioned us to work well with local officials on numerous projects around the country of varying sizes and scopes. We are confident that our experience assisting local governments to address a broad range of solid waste challenges, both technical and financial, uniquely qualifies us to assist the City of Ann Arbor.

Based on the specific interests of the City in the development of its Organics Management Plan, CB&I has supplemented our capabilities with the expertise of Project Innovations and Lake Research Partners:

- **Project Innovations** (PI) will provide public engagement services for the project, including facilitation of the advisory committees. Since 1992, PI's team members have worked alongside community stakeholders to help elected officials, administrators, and agency directors meet the needs of their communities. Having designed, planned and implemented strategic planning, visioning, and community involvement projects for over 20 years, PI's team has a robust how-to "library." They know how to build citizen-

administrator teams, how to integrate voices of opposition into the process, how to facilitate collaborative solutions, and how to communicate project results effectively. Recent work completed by Project Innovations includes the City of Ann Arbor's Deer Management Plan and Sanitary Sewer Wet Weather Study.

- **Lake Research Partners** (LRP) will program and implement a public opinion survey to gauge resident support for current and proposed organics management options. LRP has over 20 years of experience in all phases of public opinion research, from survey research design through analysis. LRP has conducted survey and focus group research on behalf of governmental agencies, elected officials, associations, non-profit groups, and political campaigns in every state and region of the country, including in Michigan. All of LRP's work is for entities facing public policy questions; they do not conduct conventional market research for products. LRP has specific experience conducting research for organizations working in collaboration with local governments, both in Michigan and across the U.S., as well as experience researching public attitudes toward solid waste management topics.

Additional information on the qualifications of the CB&I team is provided in this section. Required proposal forms and documentation of our license to operate in Michigan are provided in Attachment A. Detailed project descriptions are provided in Attachment B, and project team resumes are provided in Attachment C.

Specialized Expertise

Our team's qualifications in specific areas relevant to the City's scope of work are summarized below.

Integrated Solid Waste System Planning. CB&I has significant experience performing planning and advisory studies for public agencies throughout the U.S., including Alaska, California, Florida, Illinois, Indiana, Iowa, Michigan, Minnesota, New Jersey, New Mexico, New York, Ohio, Pennsylvania, Texas, and Wisconsin. In total, we have developed comprehensive solid waste management plans for over 60 public agencies representing over 9 million people, and have also assisted with the implementation of many of those plans. Organics management has been considered as part of the integrated solid waste management system in many of the plans we have developed. As a result, we have expert understanding of integrated waste management strategies, programs, and facilities that are being evaluated and developed across the nation.

To provide direction to local communities and establish a basis for implementing future policies and strategies, our comprehensive solid waste management plans include inventories of existing conditions, programs, and facilities; evaluation of diversion and disposal alternatives; cost analysis of specific programs and/or facilities; recommendations for near-term and long-term implementation; and system cost impacts of the recommended options. Many of these elements will be incorporated into the scope of work for development of the City's Organics Management Plan.

Organic Waste Management Facilities Services. CB&I has provided a wide range of services to organic waste management facilities across the U.S. We have assisted our clients in evaluating and establishing programs and facilities to manage a variety of organic wastes, including yard wastes, wood wastes, food wastes, manure and agricultural wastes, and biosolids. In addition, CB&I has assisted traditional transfer stations and MRF's with management of the organic

components of their waste streams on numerous projects, as part of their integrated solid waste management systems.

Composting has become an important element of integrated waste management systems for many jurisdictions across the U.S., and is well-developed currently in Ann Arbor, providing the potential to capitalize on existing infrastructure as part of the City's Organics Management Plan. CB&I provides a range of services for composting evaluations and management services including feasibility studies; market analysis; facility design, siting, and permitting; identification of grant funding and public/private ventures; and public education, surveying, and outreach.

Incorporation of additional organic materials (e.g., food scraps and food-contaminated paper products) into existing composting operations will require careful consideration of regulatory requirements, technology applicability, and cost, all of which we have prior experience evaluating. We have evaluated composting options for the management of yard wastes and wood wastes as well as the mixed municipal waste stream. For example, we completed a feasibility study of mixed waste composting for the Central Iowa Solid Waste Management Agency and for the East Central Solid Waste Commission (Mora, MN).

We have also worked with a number of clients to evaluate emerging options to manage their organic wastes. As an example, we have evaluated the feasibility of anaerobic digestion for the City of Chicago and are currently completing an anaerobic digestion feasibility study for the State of Illinois. We have also evaluated food scrap management options for a restaurant co-op in Chicago. Our experience evaluating organic waste management technologies will provide valuable guidance to the City and the advisory committees during development of the Organics Management Plan.

Diversion Program Analysis and Implementation. CB&I also assists clients to implement solid waste projects, whether it is a single program or facility or a complete, integrated solid waste management system. In that regard, increasing or maximizing waste reduction and diversion continues to be a focus of many waste agencies, and balancing the impacts of waste diversion on existing waste management operations is an important consideration for public agencies.

We are assisting a number of clients to develop and implement enhanced, sustainable diversion programs. Some of our recent projects to further increase diversion include:

- Performance of a comprehensive market assessment, regulatory review, and technology evaluation to develop an in-vessel composting facility to process organic wastes from green grocers; performed for one of the largest in-vessel facility developers in the U.S.
- Feasibility study of converting inactive concrete grain silos to anaerobic digesters for organic wastes
- Design of an outdoor recycling area for appliances, tires, C&D waste, wood waste, and biosolids at a planned transfer station
- Operational review of an existing transfer station to identify additional diversion opportunities, optimizing the use of existing infrastructure
- Evaluation of a Dirty-MRF addition to an existing transfer station in a rural area in an effort to meet aggressive recycling goals
- Incorporation of a multi-purpose material recovery, household hazardous waste, and citizens' convenience center at a publicly-owned and privately-operated landfill
- Investigation and evaluation of beneficial end uses for trommel fine materials (100,000 tons per year) from material recovery and recycling facilities
- Design and permitting of a mixed C&D material processing and recycling facility

- Permitting of a shingle processing facility to reclaim asphalt shingles and produce recycled asphalt pavement
- Development of a construction / demolition materials management plan for a $100 million riverfront redevelopment project
- Evaluation of conversion from multi-stream to single-stream curbside recycling collection
- Benchmarking quantities and costs of current drop-off recycling program
- Development of procurement documents (RFI/RFP) and energy market assessment for conversion technology facilities

Public Engagement and Facilitation. Nearly every solid waste project CB&I is involved in, from planning to program and infrastructure development, includes some level of public engagement or public input. This input is particularly important for projects for which implementation of proposed strategies is intended, as is the case with the City's Organics Management Plan. All of CB&I's key personnel for the City's project have experience providing expert witness testimony and explaining technical material to elected officials, stakeholders and the general public, making us well prepared to facilitate and guide contentious matters, should they arise during the project.

Our outreach capabilities are enhanced through a range of solid waste training projects that CB&I has completed for regulatory authorities, government agencies and professional solid waste associations. We have developed comprehensive training/educational materials and instructed training courses for the Solid Waste Association of North America, the trade organization representing the public-sector solid waste industry. For the Illinois Recycling Association, we developed a commercial recycling toolkit and conducted educational workshops throughout the state. We also conducted workshops with the Iowa Department of Natural Resources to help local governments prepare for the implementation of more stringent landfill regulations. These agencies recognize and rely on CB&I's solid foundation of technical expertise and guidance in all areas of solid waste management, further emphasizing the strength of our staff professionals.

To further increase our public engagement capabilities on this project, Project Innovations will assist CB&I and the City in developing the public engagement strategy, identifying potential members of the advisory committees, and facilitating advisory committee and public meetings. PI will work with the project team to create meaningful, realistic desired outcomes; facilitate the public engagement process to achieve those outcomes, and summarize the results for the project record. PI facilitates all types of meetings, including:

- All-employee meetings
- Team organizations and kick-offs
- Partnering session meetings
- Public meetings
- Motivational meetings
- Strategic planning sessions
- Brainstorming sessions
- Focus groups
- Project start-ups
- Visioning and goal-setting meetings

In the past 15 years, Project Innovations has been engaged in nearly 20 projects in the region with governments or non-profit agencies which included facilitation of citizen task forces on a range of topics including several environmental issues. Recently, PI worked with the City on its Deer Management Plan and completed a series of facilitation workshops with the City's Downtown Development Authority. PI's extensive local experience will provide unique insight and guidance to the project team during the development of the Organics Management Plan.

In addition, CB&I has augmented the project team with the participation of Lake Research Partners to perform a scientific survey of residents. This survey will be important for obtaining broader community input and providing valuable guidance to the City Council as it considers suggested recommendations presented in the Organics Management Plan. LRP's surveys are trusted, and they have a reputation for providing high-quality and strategically sound research, on-time and on-budget. Projects are approached creatively and comprehensively, with full understanding of the issues to suggest approaches, ideas, strategies, survey instruments that meet client objectives.

LRP extends that same philosophy to reporting on survey findings. Their reports distinguish them from other firms in their comprehensiveness and strategic orientation. LRP works closely with public agencies, elected officials, and government staff, and they understand the vocabulary of urban policy and elected officials. Their reports have been made to Boards and Councils as part of the official record for public agencies. They also have extensive experience in testing residents' levels of satisfaction with and perceptions of city services on behalf of a broad array of municipalities and government agencies, and a deep understanding of assessing residents' reactions to proposed future projects and city services. Beyond conducting surveys and interpreting their results, LRP seeks to be full partners and advisors. The information gained through LRP's survey of residents will provide invaluable information to the Ann Arbor City Council as it weighs options for future organics management.

Related Project Experience

Relevant project experience illustrating the depth of experience of CB&I, Project Innovations, and Lake Research Partners is provided in Attachment B. Reference contacts are also provided; we encourage the City to contact our references to confirm the high quality of work completed by our project team. Additional information on the diverse capabilities of the project team can be provided upon request.

Project Team

We have assembled an experienced project team to assist the City of Ann Arbor to develop its organics management plan. CB&I's project team includes experienced solid waste professionals, all with 15 years or more of consulting experience. Our team includes experts in planning, financial analysis, facility and program design and operations, regulatory compliance, and public outreach. We have supplemented our team with Charlie Fleetham of Project Innovations, a local public engagement expert with prior experience on various projects in Ann Arbor, and Lake Research Partners, a public opinion research firm with more than 20 years of experience assisting local governments to assess attitudes and behaviors of targeted groups.

Combined, our team of professionals provides more than 120 years of waste-related and public engagement expertise to the City. These key professionals are backed by significant other staff resources within the CB&I organization. Notably, all of CB&I's project team members have been working collaboratively as a team for 15 years or more, providing depth of experience to the City, a coordinated team approach to completing this project, and demonstrated continuity of the project team.

Brief professional summaries of key team members are provided below. Detailed resumes are provided in Attachment C.

Devin Moose, P.E., DEE, Project Director (CB&I). Mr. Moose will provide peer review and technical oversight during the project. Mr. Moose is the National Director of CB&I's Solid Waste Consulting and Engineering practice and has more than 30 years of solid waste industry experience. He directs the execution of solid waste planning and procurement projects and the planning, design, and permitting of solid waste transfer stations, recycling facilities, compost facilities, and disposal facilities. Mr. Moose supervises the development of economic impact studies and facility business plans; provides contract negotiation expertise for solid waste contracts; performs public presentations for solid waste plans and solid waste facilities; and provides expert witness testimony.

Phillip Kowalski, Project Manager (CB&I). Mr. Kowalski will be the project manager for the City's project. Mr. Kowalski is a principal planner and economist with more than 25 years of solid waste consulting experience. His project experience has included planning, procurement, and plan implementation services for metropolitan governments, rural communities, and regional agencies across the United States. Mr. Kowalski is responsible for conducting regulatory, statistical, and economic analyses as part of a multi-discipline project team. He develops project cost estimates and develops business and marketing plans for all types of solid waste facilities. He also prepares permit applications, solid waste needs assessments, and economic feasibility studies. Mr. Kowalski will be the primary point of contact for the City during the term of the contract.

Christina Seibert, Project Planner (CB&I). Ms. Seibert is an environmental scientist and planner and will serve as a project planner for the City's project. Ms. Seibert has 15 years of solid waste planning and consulting experience, working with both public sector and private sector clients to complete a wide range of planning and implementation assignments. Ms. Seibert is responsible for the development of local and regional solid waste management planning studies. She has prepared needs assessments for solid waste facilities, conducted feasibility studies, prepared economic evaluations, performed waste characterizations, developed procurement documents for contracting agencies as well as contractors, and assisted with the preparation of siting and permit applications for solid waste facilities. She was the principal author and SWANA instructor for its Managing Integrated Solid Waste Management Systems training course.

Michelle Spruth, Project Engineer (CB&I). Ms. Spruth has over 19 years of experience in the solid waste industry within the U.S. and United Kingdom. Ms. Spruth has worked as part of a team and managed the development of solid waste facilities projects both in the operational and consulting arena for the private and public sectors. Ms. Spruth is experienced in undertaking and leading stakeholder consultations and serving as a liaison with local, regional, state and federal regulators to determine the best-fit solutions as part of facility development. Ms. Spruth has undertaken siting, development and permitting requirements for solid waste disposal, treatment and processing requirements for a number of landfills, transfer stations, material recycling and organic processing facilities, most recently completing permitting of a large composting facility in northern Illinois.

Charlie Fleetham, Public Engagement Expert (Project Innovations). Mr. Fleetham is a successful management consultant, author, speaker, and trainer with over 20 years of public engagement experience. He has a storehouse of expertise in leadership development, organizational change, and strategic planning. He has helped many public sector clients with strategic planning, public involvement, and leadership development including City of Ann Arbor, Bloomfield Hills Schools, City of Farmington, City of Kalamazoo, City of Romulus, Detroit Water and Sewerage Department, Michigan Technological University, and Wayne County.

Daniel Gotoff, Public Opinion Survey Expert (Lake Research Partners). Mr. Gotoff is a former resident of Ann Arbor, who now heads Lake Research Partners' New York office. Since joining the firm in 1996, he has worked for candidates at all levels of the electoral process, including extensive experience in Michigan, as well as on a wide range of issues, including the economy, national security, and government accountability. He was a lead researcher on the SWANCC public opinion research effort in 2013 and has experience assessing public attitudes and satisfaction on a range of public services, including solid waste.

SCOPE OF WORK

Project Understanding

The City of Ann Arbor has made great strides in developing and implementing a sustainable solid waste system that focuses on diversion and capturing the resource value of materials. Over the past 10 years, the City has adopted cart-based collection of trash (2005), cart-based collection of recyclables (2010), and a commercial waste franchise (2009) in conjunction with the expansion of commercial recycling[1]. With respect to organic material, the City began offering cart-based collection of yard waste (2008) in addition to bag-based collection, and subsequently expanded the materials allowed in carts to include vegetative food waste (2009) and food scraps generally (2014) including vegetative food waste in cart-based yard waste collection (2009)[2]. The City also owns a MRF/transfer station, operated under contract, and a drop-off station, which is operated by Recycle Ann Arbor, a not-for-profit organization.

With the addition of these programs, the City reported a single-family diversion rate of 49 percent in FY2011/12, and an overall diversion rate (including commercial waste) of 31 percent in that year[3]. The City has established diversion goals of 60 percent for the single-family waste stream and 40 percent for the total waste stream by 2017 as interim steps in meeting the community's zero waste goal.

As documented in the *Waste Less: Solid Waste Resource Plan*, organics comprise a significant fraction of the trash that is currently disposed by the City. That Plan included several recommendations concerning food waste and other organics as a means of meeting future diversion goals, and earlier planning efforts[4] also identified organics as a target material. In May of 2015, the City Council directed City staff to develop a Comprehensive Organics Management Plan for consideration by the City Council, including program and funding recommendations. The City has issued RFP951 to obtain technical assistance from consultants to assist the City with plan development and community engagement.

Based on our review of RFP951 and the resolution authorizing the Organics Management Plan, as well as our review of the *Waste Less* Plan and other planning documents, we have made the following observations about the City's existing system and solid waste goals. These observations informed the development of our proposal, and may further serve as guidelines during the development of the Organics Management Plan.

1 *Waste Less: City of Ann Arbor Solid Waste Resource Plan Update 2013-2017*.
2 *Ibid.*, and, Michigan Live, "Recycling Food Waste: Ann Arbor Residents Can Now Scrape Plates into Compost Carts", May 5, 2015.
3 *Waste Less*, Appendix D.
4 Ann Arbor Commercial Recycling Committee, *Recommendations Report*, January 10, 2007.

- First, the Council resolution authorizing the study states that the overall goal of the Organics Management Plan is to present program and funding recommendations for consideration by the Council. This suggests that a comprehensive range of criteria will have to be considered in evaluating options and developing recommendations, including diversion potential, cost, convenience to residents and businesses, community acceptance, and best practices/experience in other communities. Simply put, the Council would like various options presented, along with the pros and cons of each option, so that it may consider the best approach to increase organics diversion in the City.

- Second, what is notable about the City's progress in developing its current solid waste system (as discussed in the opening paragraphs of this section) is that new initiatives have been implemented in a phased manner, building upon the success of existing infrastructure and programs. For example, carts were offered to residents for the collection of yard waste first, and then the allowable materials were subsequently expanded to include vegetative food waste and then food scraps generally. This is a sound approach for developing effective programs that are embraced by the community, and have contributed to the success of the City's programs.

- Third, there is strong community involvement in the City, which also contributes to the success of the City's solid waste program. The RFP includes community engagement as a primary element of the Organics Management Plan, and we have included a sound stakeholder participation plan in our scope of work. We view our role as providing technical assistance to the City, but fully recognize that a sound Organics Management Plan will require the input and consensus of stakeholders if it is to be implementable and accepted by the community.

- Fourth, the National Citizen Survey for Ann Arbor for 2015 (as well as prior years) indicates a high-level of satisfaction with solid waste services in the City. For 2015, 91 percent of surveyed residents had a positive view of the City's garbage collection, with corresponding favorable views of recycling (90 percent) and yard waste (84 percent). The City should be rightfully proud of these high "grades" from its residents, and maintaining high levels of customer satisfaction should be a factor in the development of the Organics Management Plan. Our scope of work includes a scientific survey to augment the community engagement activities identified in RFP951, with the goal of obtaining even broader community input and providing valuable guidance to the City Council.

- Fifth, we understand that the City and its residents and businesses have a strong environmental ethic and commitment to increasing diversion. We have the necessary experience to assist the City to consider a range of strategies for managing organics. We also recognize, however, that municipalities continue to face challenging economic conditions, a fact recognized in the *Waste Wise* Plan. In discussing the historical and projected future financial performance of the solid waste enterprise fund, the *Waste Wise* Plan noted: "This tightening financial picture will require careful consideration of the financial impact of any new programs that are proposed. This should include recommendations for funding any net additional costs." Our team includes experienced solid waste economists, and we are uniquely qualified to assist City staff and stakeholders to evaluate organics management options from a technical, economic and community acceptance perspective.

- Sixth, the City's current system is based on partnerships, with important services provided by not-for-profit and for-profit organizations including: Recycle Ann Arbor, We Care, Waste Management and ReCommunity. RFP951 includes consideration of the City contracting for services as a potential implementation option. We agree that this is a sound option to consider, especially for organics management alternatives, which require unique handling and processing expertise. All of our solid waste plans have included implementation roles for both government agencies and the private sector, tailored to meet the capabilities of each sector; we will bring this experience and perspective to the City's Organics Management Plan.

In the narrative work plan which follows, we have prepared a base proposal and an alternate proposal. The base proposal, which is our recommended work plan to the City, includes a broader scope of activities for the community engagement task, including a scientific resident survey. We have also developed an alternate work plan, which we believe still meets the requirements of RFP951, but includes fewer meetings and does not include the scientific survey; this alternate would have lower costs. We prepared the two scopes to provide City staff with flexibility in selecting a work plan that best meets the needs and resources of the City.

Work Plan - Base Proposal

The consultant team has prepared the following work plan to address the services requested by the City. The work plan is based on: 1) our review of RFP951 (including Addendum #1); 2) a preliminary review of prior planning documents, including the *Waste Wise* Plan and commercial franchise agreement; CB&I's prior experience in solid waste planning and diversion program analysis and implementation; Project Innovation's prior experience in conducting community engagement and facilitation, including experience in Ann Arbor on environmental issues; and Lake Research's prior experience in conducting scientific surveys, including surveys addressing public views of waste management programs. CB&I has previously worked with Lake Research on solid waste surveys, and has added Project Innovations to the team due to their extensive facilitation/outreach experience and specific experience in Ann Arbor. CB&I had multiple discussions with both subcontractors to review the scope requested by the City and obtain their input. The work plan below reflects the unique and specialized experience of CB&I, Project Innovations, and Lake Research. For reference purposes, a summary schedule is presented at the end of this work plan; this will facilitate review of dates identified in the various tasks below.

Task One Documentation Review

As the initial Task in the project, and in preparation for the kick-off meeting with the City's Work Group in Task Two, CB&I and Project Innovations will perform a document review as requested in RFP951, including:

- Solid Waste Management Plan
- Climate Action Plan
- Sustainability Framework
- Urban and Community Forest Management Plan
- MS4 Stormwater Permit
- Biodigester Feasibility Study

CB&I will perform this review to begin gathering preliminary information on the City's solid waste system; understand prior solid waste planning activities conducted by the City (both as they related to diversion in general and organics in particular); and understand the role of solid waste

diversion in other sustainability/environmental initiatives of the City. Project Innovations will perform its review to identify prior community engagement activities in the City's environmental initiatives, which will inform the development of the community outreach strategy (Task Two); and to develop an initial familiarity with solid waste and organics management issues.

In addition to the above, we would also propose to review contractual agreements that the City has with partner organizations, including Recycle Ann Arbor, WeCare, and Waste Management. Our interest in those agreements is to identify potential opportunities for future collection and processing of organics materials, as well as any existing contractual conditions that might impact future collection and processing of the materials.

Overall, this review will result in questions and issues to be further explored during subsequent tasks of the project.

Task Two Community Engagement

The consultant team understands that the City desires a robust community engagement process during the preparation of the Organics Management Plan. Based on our prior planning experience, we believe such an effort is important to obtain stakeholder input into the Plan and, to the extent possible, build community consensus on recommendations prior to presenting the Plan to elected officials. Community engagement during plan development also contributes to having a final plan that can be implemented.

Task 2.1 Develop Public Engagement Strategy

In conjunction with the City's Work Group, the consultant team will prepare a strategy to provide for active participation of stakeholders in the planning process. Specific activities under this subtask include:

- Situation Analysis: Identify key issues the Public Engagement Program will address. The issues will vary by project area as will all of the below activities.
- Objectives: Clarify objectives of the public engagement efforts in support of the City's objectives.
- Develop Message Model: Identify the key messages that must be communicated to build trust in the project team's competence.
- Target Audience Lists: Develop an expanded list of stakeholders, including the RFQ's listed groups and appropriate press contacts (on-line and print, newsletters, business, local, and broadcast), and other influencers.
- Engagement Matrix: Create a matrix to be used to determine which stakeholder groups will be targeted for each project area.
- Contact Plan: Confirm interview, meetings, and survey requirements.
- Create a public engagement strategy, with timeline/milestones for each phase/meeting event.
- Document the public engagement strategy using Ann Arbor's Community Action Plan format.

The public engagement strategy will be a key agenda item for the initial kick-off meeting with the City's Work Group.

Task 2.2 Kick-off Meeting with City's Work Group

The consultant team proposes a kick-off meeting with the City's Work Group approximately 2 weeks after we commence work (the reason for the 2 week interval is to allow time for document review and to prepare initial thoughts on the public engagement strategy, so that the kick-off meeting is more effective). We envision a full day meeting with the Work Group, and will prepare a formal agenda prior to the meeting, but at this stage we would propose to allocate a morning session to discussion of project management issues, schedule, and the public engagement strategy, and the afternoon session to a preliminary discussion of technical issues as described below:

Morning Session

- Introductions of consultant team and City Work Group members.
- Review project administration, including points of contact with the Work Group.
- Review overall work plan and project schedule.
- Discuss community outreach strategy and schedule of two advisory group meetings.
- Discuss potential members for the residential and commercial organics advisory committees.
- Discuss whether advisory committees will be open to the public. We assume so, in which case the need for by-laws or a protocol for "at-large" public participation will be discussed so that the advisory committees may complete their business in an orderly manner.
- Discuss major stakeholders for individual interviews.
- Discuss scientific resident survey and obtain preliminary input from Work Group.
- Discuss agenda packet requirements for City Council and the Environment and Planning Commission committees (in particular, how far in advance of the scheduled meetings are agenda packets required).

Afternoon Session

- Discuss availability of benchmark data for current system (e.g., does the City have a count of households with organic carts? are there any data available on current participation of residents putting food scraps into organic carts? are there any observable trends in compost site tonnages since food scraps were allowed?)
- Discuss current collection responsibilities for different segments of the waste stream and customer counts for each waste stream (e.g., residential garbage, recycling and composting; commercial garbage and recycling in the downtown and outlying areas; multi-family garbage and recycling).
- Discuss financial status of the solid waste enterprise fund and gain perspective on future potential funding requirements.
- Conduct a preliminary, qualitative discussion of the pros and cons of different organics collection and processing options, with the aim of obtaining initial feedback from the City's perspective.

Task 2.3 Advisory Committees

The consultant team will work with City staff to establish a residential organics advisory committee and a commercial organics advisory committee to assist with development of the plan. Specific work activities will include:

- Work with the City Work Group to finalize the membership of each advisory committee.
- Establish a preliminary meeting schedule for the advisory committee (we understand this will be subject.to review and approval by the City and advisory committees).
- Assist the City, as necessary, with obtaining participation of advisory committee members.
- Attend each of the advisory committee meetings. CB&I will serve as a source of technical information during these meeting, with Project Innovations acting as the meeting facilitator.
- Prior to each meeting, prepare meeting materials (e.g., Powerpoint or other materials) and agenda for review by the City and then distribute to the advisory committee members. We assume that the materials will be posted on the project website (as described below) in the interest of source reduction and to facilitate timely receipt of the materials, but will have paper copies available at the meetings.
- Prepare minutes of each advisory committee meeting.

We are proposing 4 meetings of each of the advisory committees. Initially, and consistent with the City's desire to complete the project by the end of 2016, we would envision conducting the meetings of the two committees in May, July, September and November (subject to further discussion with the City). Detailed agendas will be prepared for each meeting, but a high-level agenda for the residential organics committee might comprise the following:

Meeting 1: Review project objectives, confirm meeting schedule, establish meeting protocol, and obtain initial perspectives on organics management.

Meeting 2: Discuss options, possibly with a focus on organized collection of organics (e.g., curbside collection).

Meeting 3: Discuss options, possibly with a focus on source reduction (e.g., home-based composting) and education activities. Preliminary identification and discussion of potential recommendations.

Meeting 4: Finalize recommendations of advisory committee.

Similarly, a high-level agenda for the commercial organics committee might comprise the following:

Meeting 1: Review project objectives, confirm meeting schedule, establish meeting protocol, and obtain initial perspectives on organics management (e.g., level of interest among different types of institutions and/or businesses based on their generation of organic materials).

Meeting 2: Discuss options and identify opportunities and challenges with collection of commercial organics. Discuss discrete components of organics waste stream, including food scraps, FOG, and wood waste.

Meeting 3: Discuss options and identify needs, opportunities and challenges that business and institutions may have with respect to employees segregating organic wastes. Preliminary identification and discussion of recommendations.

Meeting 4: Finalize recommendations of advisory committee.

Subtask 2.4 Focused Stakeholder Interviews

The advisory committees in Subtask 2.3 are expected to bring the insights and talents of a diverse group of talented, dedicated individuals to identifying and evaluating organics management options. These committees may decide to establish sub-committees to evaluate specific components of a comprehensive organics management plan, and the consultant team can facilitate that process if it is the desire of the committees' memberships.

Because of the broad scope of the Organics Management Plan, and the unique and specialized requirements of segregating, collecting and processing organics materials, the consultant team is proposing to develop a list of large or key stakeholders for one-on-one interviews. This list would be developed in consultation with the City's Work Group, but initially we think it would be important to meet with representatives of Recycle Ann Arbor, WeCare, Waste Management, the University of Michigan, and the Downtown Development Authority. There are other potential institutions that may be added to this list.

Our proposed scope would include two days of interviews with a final list of stakeholders determined in conjunction with the City Work Group. We would propose to conduct these interviews after the kick-off meeting, but prior to the first meeting of the advisory committees (thus, April, 2016).

Many of these stakeholders will appropriately be participants on one or both of the advisory committees. However, because of their unique position as either a large potential generator of organic materials, or else as an existing service provider in the collection and processing of organics and other materials, we believe that dedicated interviews of these stakeholders will yield important perspectives and information for consideration by the advisory committees and City Council. Often, this type of detailed information cannot be easily obtained within an advisory committee meeting.

Section 2.5. Website Management

CB&I and Project Innovations will assist the City to develop and maintain a project website. The purpose of this website will be to:

- Keep the community informed about meeting dates and schedule and encourage their participation.
- Provide access to presentation materials and meeting minutes from the advisory committees.
- Report the results of the resident survey.
- Provide access to the final report.

We have assumed that the City will provide hosting services for the webpage. The consultant team will assist the City to develop a project-specific webpage, and then will provide documents as they become available for uploading to the website. We also wish to discuss with the City whether a comment section can be added to the website to provide an additional method for the community to provide their input.

Subtask 2.6 Scientific-Based Resident Survey

Although not identified specifically in RFP951, we have added a resident survey to our proposed community engagement program. By "scientific", we mean a survey that is designed to include a

random sample of residents that is not subject to potential bias from self-reporting that can be an issue with voluntary, web-based surveys.

The survey questions would be developed by CB&I and Lake Research, in conjunction with the City's Work Group. The survey would then be implemented by Lake Research, who will also compile a report on the findings.

For this project, Lake Research is recommending a random digit dialing (RDD) sample frame. This is a method for selecting people for involvement in telephone statistical surveys by generating telephone numbers at random. Random digit dialing has the advantage that includes unlisted numbers that would be missed if the numbers were selected from a phone book. In populations where there is a high telephone-ownership rate, it can be a cost efficient way to get complete coverage of a geographic area. Using available telephone databases for telephone exchanges used within Ann Arbor, Lake Research would draw a sample among eligible numbers. Lake Research also recommends employing techniques to allow for the inclusion of wireless phones into the RDD sampling frame to increase the representativeness of the sample.

A sample size of 400-600 residents in Ann Arbor households will enable a break out of statistically significant results among critical subgroups of residents; the larger the sample, the finer and more accurate the segmentation and subsequent subgroup analysis.

We believe that the proposed survey will provide a number of benefits to the City:

- First, given the sample sizes discussed above, it will provide broad-based community input, beyond the advisory committees and stakeholder interviews. Although the advisory committee members and/or key stakeholders are a critical component of this study, they will all have individual goals, aspirations, and concerns that they will bring to the evaluation of organics options. A resident survey, on the other hand, will provide for broader community involvement and options. Simply put, the advisory committees and stakeholders are expected to a certain extent to provide "expert", or at least "experienced", advice and input, whereas the resident survey will provide input from a customer-based perspective.
- Second, the results of the resident survey will be quantifiable and statistically-significant.
- Third, the survey can be structured to ask questions and provide valuable input the advisory committees and, ultimately, the City Council. Questions could be asked about: 1) current participation in City programs; 2) knowledge of current organics opportunities such as the City's cart-based program; 3) level of interest in additional opportunities to collect organics, either curbside or through at-home composting; 4) sensitivity to additional separation and storage of organics materials, and, 5) sensitivity to different cost levels for organics programs.
- Fourth, because an expanded organics program might entail additional work on the part of households (to segregate and possibly store material), could necessitate an additional container, and might have cost implications, we think the results of the resident survey will be particularly valuable to the City Council in considering the recommendations of the Organics Management Plan.

Within the overall project schedule, we would propose to conduct the resident survey during the June/July/August period (although the actual phone calls are completed over a period of several days, additional time is required to prepare the survey and compile results). This will allow the work of the advisory committees to inform the development of the survey, and still provide time

for the committees to consider the results of the survey in analyzing options and preparing recommendations.

Task Three Identify and Evaluate Opportunities and Needs

The purpose of Task Three is to compile baseline information on quantities and sources of organics within the City. The City has identified interest in yard waste, food waste, urban wood/forestry waste, and fats/oils/greases (FOG) as components of the overall organic waste stream. The City has also identified single-family residential, multi-family residential, and commercial/institutional as generating sectors.

This will be important baseline information for considering potential organics diversion programs. We propose to use internal City data on current programs (as well as the most recent waste characterization study) to collect information on:

- Aggregate and per household quantities of garbage, recyclables and organics currently collected from the single-family residential sector.
- Quantities of garbage, recyclables and organics currently collected from other sectors.
- Distribution of accounts by sector (e.g., number of single-family accounts, multi-family accounts, and commercial accounts within the downtown area and outlying areas).
- Composition data from the City's latest waste sorting study.

We also propose to verify and augment this data through a literature review and additional research. The purpose of this supplemental data would be to obtain information on organics quantities collected in other communities (by sector, if available) that have established organics programs. This research may also yield useful information on participation rates as well as the collection systems employed in other communities.

CB&I has extensive experience in analyzing waste quantities, and will bring that experience to the City's project. We would note that tracking materials by sector or by certain materials can present challenges (e.g., FOG is typically collected outside public collection systems). Additionally, although waste composition studies provide useful information on the materials present within the disposed waste stream, actual quantities of organics (or recyclables) that are or can be collected are subject to other factors such as participation rates. That is the reason for performing additional research as noted above. In completing this task, we may present a range of values for different materials streams, and fully document the sources and limitations of any estimates. This will be important for both the advisory committees, stakeholders, and the City Council to understand.

Task Four Identify and Evaluate Logistics and Resource Needs

For this task, we will perform a detailed analysis of the resources needs for potential expanded organics collection and processing services. Consideration will be given to:

- Quantity, type and cost of trucks and equipment needed for organics from different sectors (e.g., residential, commercial, institutional).
- Quantity, type and cost of containers for year-round collection of organics.
- Typical route parameters, such as number of drivers/helpers and stops per route. This will obviously vary from the residential to commercial sector and would also depend on whether participation is voluntary or mandatory.

- Staff hours required for the City to administer a comprehensive organics program, including project management, customer service, education and outreach, and field management.
- Required training for program administration staff.
- Availability of space in downtown alleys to support additional containers for organics as well as collection equipment.
- Regulatory/health requirements for segregation and storage of organics at businesses.

The work in earlier tasks will assist in identifying and analyzing these factors. For instance, during the stakeholder interviews in Task Two, we think Waste Management can provide valuable insight into resource requirements for collection of organics from residential and commercial sources, based on their nationwide experience. Additionally, although not identified in RFP951, we think an interview with WeCare is essential in terms of discussing and evaluating processing capacity and capability to manage additional food waste at the compost facility; the addition of additional food waste and/or wood waste could impact the current compost mix, as well as present potential odor management issues. Finally, the research in Task Three will provide another source of information on resource needs based on the experience of other communities, as well as program and household costs in those communities.

Task Five Implementation Strategy Recommendations

In Task Five, the research and analysis performed by the consultant team, and considering the input provided by the advisory committees, stakeholder interviews, resident survey, and other public comments, will be synthesized into a proposed approach for implementing a comprehensive organics management program. This implementation plan will address:

- Best practices in other communities with similar conditions to the City.
- Types of programs to be implemented as part of overall organics program (e.g., source reduction, home composting, organized collection, etc.)
- Discussion of which program elements are best managed by the City and which should be contracted by the City.
- Review of City Code sections that may need to be modified (if any) to implement programs.
- Recommended phasing of implementation of specific programs.
- Discussion of how recommended programs fulfill the City's sustainability goals.

These recommendations will be developed in conjunction with the City's Work Group and the advisory committees, with the aim of presenting options to the City Council that reflect community consensus (to the extent that such consensus exists following deliberations by the advisory committees). The recommendations will also take into account the results of the resident survey performed in Task Two.

Task Six Presentations to Elected Officials

In Task Six, the consultant team will assist City staff to present the Organics Management Plan to elected officials. This will include the following activities:

- Attending one Environmental Commission Meeting to present preliminary findings and obtain feedback from the members. Please note that, based on the schedule of Environmental Commission meetings, this meeting would likely occur in late October. Because the residential and commercial organics advisory committees, under the

proposed schedule, would have their final meetings in November, the presentation to the Environmental Commission may not include final advisory committee recommendations. It would, however, include a briefing of all progress to date, along with preliminary findings.

- Attending one City Council meeting, one Environmental Commission meeting, and one City Planning Commission Meeting, to present the final report. We understand that the consultant team will be expected to play the lead role at these meetings, and have staffed those meetings so that we will be able to address all components of the study and summarize public comments. Based on the posted schedules on the City's website, these meetings would occur in late November and early December.

Project Management

The consultant team will work closely with City staff and the members of the Work Group during the development of the Organics Management Plan. The City has requested monthly in-person meetings and bi-weekly phone conferences with the consultant. These meetings have been included in our work plan; please note that we propose to conduct in-person meetings in conjunction with other schedule meetings to the extent possible. We believe this will fulfill the City's goals with respect to maintaining consistent awareness of project status.

Deliverables

The consultant team understands the deliverables specified in the RFP, and they are included in our overall work plan. In addition, our deliverables include a summary report on the resident survey.

Schedule

CB&I has developed the preliminary project schedule depicted in Table 1 to illustrate the work flow for the development of the Organics Management Plan and demonstrate completion within the City's desired time frame. We recognize the schedule is preliminary, but believe it provides the City with a high-level understanding of the distribution of work activities throughout the project completion period. We have also taken into consideration the City's schedule for City Council and various commission meetings which will occur in the late phases of the project. We anticipate that the project schedule will be reviewed and updated with a greater level of detail and certainty as the Advisory Committees are formed and meetings are scheduled after the project commences.

TABLE 1. PRELIMINARY PROJECT SCHEDULE

	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Task 1 - Documentation Review										
Task 2 - Community Engagement										
Task 2.1 - Strategy Development										
Task 2.2 - Kick-Off Meeting										
Task 2.3 - Advisory Committee Meetings										
Task 2.4 - Stakeholder Interviews										
Task 2.5 - Website Management										
Task 2.6 - Public Opinion Survey										
Task 3 - Opportunities and Needs										
Task 4 - Logistics and Resource Needs										
Task 5 - Implementation Strategy Recommendations										
Task 6 - Presentations to Elected Officials										
Environmental Commission (Feedback Meeting)										
Environmenal Commission (Final Meeting)										
Planning Commission										
City Council										

Alternate Proposal

CB&I has developed an Alternate Proposal that includes a narrower scope of activities under the community engagement program. Under the Alternate Proposal, the following activities would be changed from our Base Proposal:

- The number of meetings for each advisory committee would be reduced from 4 to 3 meetings.
- The stakeholder interview subtask would be reduced from 2 days of interviews to 1 day.
- The resident survey would be deleted from the work plan.

We believe our Base Proposal provides the best long-term value to the City, but have included the Alternate Proposal, which has a lower cost, so that the City can select a work plan that best meets its needs and resources.

AUTHORIZED NEGOTIATOR

CB&I will serve as the prime contractor for the City's project. Authorized negotiators for CB&I and the City's points of contact during proposal review and contract negotiation include:

Mr. Devin Moose
National Director of Solid Waste Consulting and Engineering
Phone: (630) 762-1400
Email: devin.moose@cbi.com

Mr. Phil Kowalski
Project Manager and Principal Planner
Phone: (630) 762-3325
Email: phil.kowalski@cbi.com

ATTACHMENT A - FORMS

ATTACHMENT A
LEGAL STATUS OF RESPONDENT

(The Respondent shall fill out the provision and strike out the remaining ones.)

The Respondent is:

- A corporation organized and doing business under the laws of the state of Louisiana, for whom Devin A. Moose bearing the office title of Nat'l Prog. Dir., whose signature is affixed to this proposal, is authorized to execute contracts on behalf of respondent.*

  *If not incorporated in Michigan, please attach the corporation's Certificate of Authority

- ~~A limited liability company doing business under the laws of the state of _____, whom _____ bearing the title of _____ whose signature is affixed to this proposal, is authorized to execute~~ contract on behalf of the LLC.

- ~~A partnership organized under the laws of the state of _____ and filed with the county of _____, whose members are (attach list including street and mailing address for each.)~~

- ~~An individual, whose signature with address, is affixed to this RFP.~~

Respondent has examined the basic requirements of this RFP and its scope of services, including all Addendum (if applicable) and hereby agrees to offer the services as specified in the RFP.

_____ Date: 11/30/15
Signature

(Print) Name Devin A. Moose Title National Program Director - Solid Waste

Firm: CB&I Environmental & Infrastructure, Inc.

Address: 1607 East Main Street, Suite E, St. Charles, Illinois 60174

Contact Phone (630) 762-1400 Fax (630) 762-1402

Email devin.moose@cbi.com

ATTACHMENT B
CITY OF ANN ARBOR DECLARATION OF COMPLIANCE

Non-Discrimination Ordinance

The "non discrimination by city contractors" provision of the City of Ann Arbor Non-Discrimination Ordinance (Ann Arbor City Code Chapter 112, Section 9:158) requires all contractors proposing to do business with the City to treat employees in a manner which provides equal employment opportunity and does not discriminate against any of their employees, any City employee working with them, or any applicant for employment on the basis of actual or perceived age, arrest record, color, disability, educational association, familial status, family responsibilities, gender expression, gender identity, genetic information, height, HIV status, marital status, national origin, political beliefs, race, religion, sex, sexual orientation, source of income, veteran status, victim of domestic violence or stalking, or weight. It also requires that the contractors include a similar provision in all subcontracts that they execute for City work or programs.

In addition the City Non-Discrimination Ordinance requires that all contractors proposing to do business with the City of Ann Arbor must satisfy the contract compliance administrative policy adopted by the City Administrator. A copy of that policy may be obtained from the Purchasing Manager

The Contractor agrees:

(a) To comply with the terms of the City of Ann Arbor's Non-Discrimination Ordinance and contract compliance administrative policy.

(b) To post the City of Ann Arbor's Non-Discrimination Ordinance Notice in every work place or other location in which employees or other persons are contracted to provide services under a contract with the City.

(c) To provide documentation within the specified time frame in connection with any workforce verification, compliance review or complaint investigation.

(d) To permit access to employees and work sites to City representatives for the purposes of monitoring compliance, or investigating complaints of non-compliance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services in accordance with the terms of the Ann Arbor Non-Discrimination Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Non-Discrimination Ordinance, obligates the Contractor to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract.

CB&I Environmental & Infrastructure, Inc.
Company Name

Signature of Authorized Representative — Date: 11/30/15

Devin A. Moose, National Program Director - Solid Waste
Print Name and Title

1607 East Main Street, Suite E, St. Charles, Illinois 60174
Address, City, State, Zip

(630) 762-1400 / devin.moose@cbi.com
Phone/Email address

Questions about the Notice or the City Administrative Policy, Please contact:
Procurement Office of the City of Ann Arbor
(734) 794-6500

Revised 3/31/15 Rev. 0 NDO-2

ATTACHMENT C
CITY OF ANN ARBOR
LIVING WAGE ORDINANCE DECLARATION OF COMPLIANCE

The Ann Arbor Living Wage Ordinance (Section 1:811-1:821 of Chapter 23 of Title I of the Code) requires that an employer who is (a) a contractor providing services to or for the City for a value greater than $10,000 for any twelve-month contract term, or (b) a recipient of federal, state, or local grant funding administered by the City for a value greater than $10,000, or (c) a recipient of financial assistance awarded by the City for a value greater than $10,000, shall pay its employees a prescribed minimum level of compensation (i.e., Living Wage) for the time those employees perform work on the contract or in connection with the grant or financial assistance. The Living Wage must be paid to these employees for the length of the contract/program.

Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from compliance with the Living Wage Ordinance. If this exemption applies to your company/non-profit agency please check here [ ] *No. of employees* ___
The Contractor or Grantee agrees:

(a) To pay each of its employees whose wage level is not required to comply with federal, state or local prevailing wage law, for work covered or funded by a contract with or grant from the City, no less than the Living Wage. The current Living Wage is defined as $12.81/hour for those employers that provide employee health care (as defined in the Ordinance at Section 1:815 Sec. 1 (a)), or no less than $14.30/hour for those employers that do not provide health care. The Contractor or Grantor understands that the Living Wage is adjusted and established annually on April 30 in accordance with the Ordinance and covered employers shall be required to pay the adjusted amount thereafter to be in compliance (Section 1:815(3).

Check the applicable box below which applies to your workforce

[ ] Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage without health benefits

[X] Employees who are assigned to any covered City contract/grant will be paid at or above the applicable living wage with health benefits

(b) To post a notice approved by the City regarding the applicability of the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.

(c) To provide to the City payroll records or other documentation within ten (10) business days from the receipt of a request by the City.

(d) To permit access to work sites to City representatives for the purposes of monitoring compliance, and investigating complaints or non-compliance.

(e) To take no action that would reduce the compensation, wages, fringe benefits, or leave available to any employee covered by the Living Wage Ordinance or any person contracted for employment and covered by the Living Wage Ordinance in order to pay the living wage required by the Living Wage Ordinance.

The undersigned states that he/she has the requisite authority to act on behalf of his/her employer in these matters and has offered to provide the services or agrees to accept financial assistance in accordance with the terms of the Living Wage Ordinance. The undersigned certifies that he/she has read and is familiar with the terms of the Living Wage Ordinance, obligates the Employer/Grantee to those terms and acknowledges that if his/her employer is found to be in violation of Ordinance it may be subject to civil penalties and termination of the awarded contract or grant of financial assistance.

CB&I Environmental & Infrastructure, Inc.
Company Name

Signature of Authorized Representative — Date: 11/30/15

Devin A. Moose, National Program Director - Solid Waste
Print Name and Title

1607 East Main Street, Suite E, St. Charles, Illinois 60174
Address, City, State, Zip

(630) 762-1400 / devin.moose@cbi.com
Phone/Email address

Questions about this form? Contact Procurement Office City of Ann Arbor Phone: 734/794-6500

Revised 3/31/15 Rev 1 LW-2

ATTACHMENT D

VENDOR CONFLICT OF INTEREST DISCLOSURE FORM

All vendors interested in conducting business with the City of Ann Arbor must complete and return the Vendor Conflict of Interest Disclosure Form in order to be eligible to be awarded a contract. Please note that all vendors are subject to comply with the City of Ann Arbor's conflict interest policies as stated within the certification section below.

If a vendor has a relationship with a City of Ann Arbor official or employee, an immediate family member of a City of Ann Arbor official or employee, the vendor shall disclose the information required below.

Certification: I hereby certify that to my knowledge, there is no conflict of interest involving the vendor named below:

1. No City official or employee or City employee's immediate family member has an ownership interest in vendor's company or is deriving personal financial gain from this contract.
2. No retired or separated City official or employee who has been retired or separated from the City for less than one (1) year has an ownership interest in vendor's Company.
3. No City employee is contemporaneously employed or prospectively to be employed with the vendor.
4. Vendor hereby declares it has not and will not provide gifts or hospitality of any dollar value or any other gratuities to any City employee or elected official to obtain or maintain a contract.
5. Please note any exceptions below:

Vendor Name	Vendor Phone Number
CB&I Environmental & Infrastructure, Inc.	(630) 762-1400
Conflict of Interest Disclosure *	
Name of City of Ann Arbor employees, elected officials, or immediate family members with whom there maybe a potential conflict of interest.	( ) Relationship to employee ( ) Interest in vendor's company ( ) Other
Not Applicable	

*Disclosing a potential conflict of interest does not disqualify vendors. In the event vendors do not disclose potential conflicts of interest and they are detected by the City, vendor will be exempt from doing business with the City.

I certify that the information provided is true and correct by my signature below:

Signature of Vendor Authorized Representative	Date	Printed Name of Vendor Authorized Representative
	11/30/15	Devin A. Moose

PROCUREMENT USE ONLY

☐ Yes, named employee was involved in Bid / Proposal process.

☐ No, named employee was not involved in procurement process or decision.

ATTACHMENT B - RELATED PROJECT EXPERIENCE

Relevant recent projects that illustrate the depth of the CB&I team are provided below. These projects address various major areas of the City's scope of services.

CB&I Experience - Composting

City of Chicago Department of Environment
Feasibility Analysis of Anaerobic Digestion Technology

CB&I was selected by the City of Chicago Department of Environment (DOE) to perform a feasibility study on anaerobic digestion of organic wastes. DOE had developed an innovative concept to convert an underutilized grain silo complex (one of the largest silo structures in the world with a capacity of 14 million bushels) into anaerobic digesters, thereby providing an adaptive reuse for the structure. In performing the analysis, CB&I conducted a survey of AD vendors and reference facilities worldwide to assess the status of the technology, its applicability to the silo structure, capital costs and associated development considerations, and operating and maintenance costs. Survey responses were received from 11 technology vendors representing a range of systems. CB&I also researched the available market for digestive outputs, evaluated regulatory issues, identified grant funding sources, and assessed the applicability of offsets such as carbon credits and green tags. Based on the study findings, it was determined that conversion of the silos to anaerobic digesters would be more costly and present technological challenges compared to developing a greenfield facility.

CB&I Personnel: *Phil Kowalski (Project Manager), Christina Seibert, Devin Moose*

Reference Contact: Kevin Laberge, Environmental Engineer, (312) 744-3900

Project Schedule and Budget: *July-October 2007, $74,895*
Completed according to schedule and within budget

Plote Development (East Dundee, Illinois)
Organics Composting Facility Planning and Development

CB&I developed and permitted the largest landscape and organic waste composting facility within the State of Illinois. The Plote facility, located in East Dundee, is expected to commence operation in spring 2016. The compost facility is approximately 60 acres in size and has been designed to process 650,000 cubic yards of incoming material annually. Organic materials will be managed aerobically in windrows. Materials to be accepted include landscape waste (inclusive of grass clippings, leaves, sod, brush, logs, stumps, and trees) and other organic materials, with up to ten percent of total accepted volume being food waste. Landscape waste will be managed through windrows at this facility.

CB&I was responsible for all aspects of the facility planning, design, and development. Services completed to date have included:

- Securing Planned Use Development zoning designation for the facility and the larger industrial park in which it is located;
- Completing a site hydrogeologic investigation;
- Identifying regulatory setback requirements and securing necessary documentation;
- Developing detailed site design;
- Completing stormwater permitting;
- Securing both Development (DE) and Operating (OP) permits from the Illinois Environmental Protection Agency;
- Developing and monitoring the site SWPP Plan; and
- Developing construction plans and overseeing facility construction.

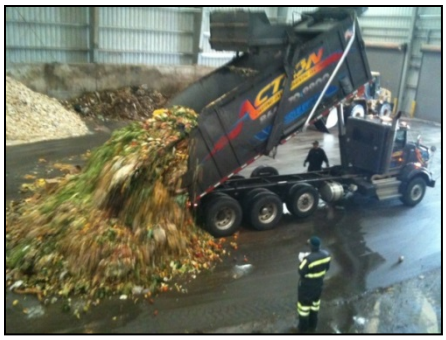
CB&I Personnel: *Richard Southorn (Project Manager), Devin Moose*

Reference Contact: *Ryan Trottier, Vice President, (847) 428-1000 x 230*

Project Schedule and Budget: *2013-ongoing, $145,000*
Currently on schedule and within negotiated budget

Chicago Composts, LLC (Chicago, Illinois)
Organics Processing Facility Business Planning and Development Assistance

CB&I (as its predecessor company, Shaw Environmental, Inc.) was retained to assist Chicago Composts, LLC in securing funding, designing, developing, permitting, and operating a commercial-scale food waste composting facility in the City of Chicago. Chicago Composts, LLC was formed in 2008 as a partnership between Peninsula Compost Group and The Rosenthal Group (the LLC has since dissolved). The Rosenthal Group was also a founder of the Green Chicago Restaurant Coalition, a cooperative group of more than 200 restaurants in Chicago seeking to operate with more sustainable, environmentally protective products and services, including food scrap management alternatives.



CB&I secured grant funding from the Illinois Department of Commerce and Economic Opportunity to assess the existing organic waste collection market, quantify the committed feedstocks (including food wastes, green wastes, and compostable food service wastes) available to the facility, conduct detailed evaluations of a proposed in-vessel composting technology, and evaluate potential site locations for technological and regulatory feasibility. CB&I also performed a detailed review of proposed project capital and operating costs to assess economic viability and develop a proposed tipping fee to ensure sustainable operations.

CB&I Personnel: *Christina Seibert (Project Manager), Phil Kowalski*

Reference Contact: *Dan Rosenthal, President of The Rosenthal Group, (312) 787-1096*

Project Schedule and Budget: *2008-2010; $40,000*
Completed according to schedule and within budget

Ridge Capital Partners
Environmental Due Diligence and Regulatory Compliance Reviews

CB&I (as its predecessor company, Shaw Environmental, Inc.) conducted environmental due diligence and regulatory compliance reviews of certain WeCare Organics facilities included in a preliminary acquisition portfolio. The facilities reviewed included:

- Compost facilities;
- Biosolids processing / management facilities;
- Wood waste recycling facility;
- Transfer station facilities;
- Transportation facilities; and
- Construction and demolition landfill facility.

WeCare facilities in 10 markets in Massachusetts, New York, New Jersey, and Pennsylvania were reviewed. The reviews included the following:

- Review of facility permit applications, permits, monitoring data, and inspection reports to identify regulatory compliance.
- Review of facility stormwater management systems to confirm that stormwater will be managed during construction, operation, and closure activities such that surface water quality will not be impacted and that on-site structures are designed to effectively manage surface water quantities.
- Review of applicable regulatory location standards.
- Review of available federal, state, tribal, and local regulatory agency records pertinent to the properties to meet requirements of ASTM E1527 - Standard Practice for Environmental Assessments.
- A review of any available corporate reports or records related to environmental issues, releases, or other incident reports.
- Review of information available on general geology and topography of the property, local groundwater conditions, sources of water, power, and sewer, and proximity to ecologically sensitive receptors (e.g., streams).

CB&I Personnel: *Devin Moose, Pamela Thomas*

Reference Contact: *Mr. J. Bradley Davis, Managing Partner, (540) 687-8161*

Project Schedule and Budget: *October-November 2010; $49,945*
Completed according to schedule and within budget

Garden Prairie Organics (Garden Prairie, Illinois)
Compost Facility Compliance Review and Permitting

CB&I was contracted by Garden Prairie Organics to provide technical and regulatory support for its composting facility in Garden Prairie, Illinois. Garden Prairie Organics provides 330,000 cubic yards of organic waste processing capacity annually to the greater Chicago area. Compliance support included the following activities:

- Negotiations and agreement with Illinois EPA regarding site requirements and permit constraints;

- Modifications to site layout and material storage to facilitate efficient operations;
- Recommendations for modifications to site operations; and
- Submission of a permit modification to address changes in organic management operations for the site, including providing increased capacity to manage non-landscape waste organics (e.g., food scrap, soiled paper).

CB&I Personnel: *Michelle Spruth (Project Manager), Devin Moose*

Reference Contact: *Michael DiMucci, Manager, (815) 597-1318*

Project Schedule and Budget: *2014-ongoing; $40,000*
Currently on schedule and within budget

Northern Recycling Compost (Zamora, California)
Compost Facility Planning and Permitting

CB&I provided technical support for the development of an Aerated Static Pile (ASP) composting operation at Northern Recycling's organic waste processing facility in Zamora, California. The permanent ASP operation will replace the similar pilot operation of a covered ASP system which commenced operation in 2010 for the processing of pre- and post-consumer residential and commercial food and green waste from Yolo and Sacramento counties. Services provided by CB&I included:

- A modification to the existing Conditional Use Permit for a permanent ASP composting operation.
- Increase in site storage capacity from 50,000 cubic yards to 100,000 cubic yards.
- Additional on-site storm water controls for on-site storage.
- Reconfiguration of site to assist with operation of the facility.
- Technical review and recommendations for improvement of the current ASP composting system.
- Economic valuations based on current requirements, proposed contracts, and upcoming modified regulatory requirements.

CB&I Personnel: *Michelle Spruth*

Reference Contact: *Bob Pestoni, Manager, (707) 963-7988*

Project Schedule and Budget: *2014-ongoing; $30,000*
Currently on schedule and within budget

Upper Valley Recycling (St. Helena, California)
Organics Management Program Planning and Permitting

Recent California policies and regulations require mandatory commercial food waste collection programs as soon as 2016 with a potential ban of organics by 2020. CB&I was commissioned to provide permit application support for a proposed organic blending facility to accommodate pre-treatment for the facility's existing in-vessel composting operation, positioning it to accept increased quantities of food waste. The facility at Whitehall Lane serves the Upper Valley Waste Management Authority in California's Napa Valley. The proposed blending facility would utilize a 21,000 ft^2 building for the operation.

The Whitehall Lane facility processes grape pomace, wood, yard waste, and food waste from the local and regional area. The combination of collecting and blending food waste through the in-vessel system at Upper Valley with finished compost and compost overs in combination with other recovery operations provides an efficient and effective operation for organic waste management for the area.

CB&I Personnel: *Michelle Spruth*

Reference Contact: *Christy Abreu, Manager, (707) 963-7988*

Project Schedule and Budget: *2014-ongoing; $30,000*
Currently on schedule and within budget

Confidential Private-Sector Client
Recycling Market Assessment

CB&I researched regional recyclables processing market conditions on behalf of a private company to assess the potential for development of a new facility. Our services included researching existing processing operations, reviewing processing agreements to assess pricing and volumes, and evaluating current material flows. Options to source material to the potential facility were reviewed, including identifying contracting options with local communities.

CB&I Personnel: *Phil Kowalski (Project Manager), Devin Moose, Christina Seibert*

Project Schedule and Budget: *February-June 2013; $33,220*
Completed on schedule and within budget

CB&I Experience - Public Engagement

Solid Waste Agency of Northern Cook County
Solid Waste Management Plan 20-Year Update

CB&I was retained by SWANCC to prepare a 20-year update to its solid waste management plan. SWANCC is a consortium of 23 member municipalities representing approximately 700,000 residents. SWANCC has historically been a leader in the implementation of innovative and forward-thinking diversion programs, including piloting the first residential curbside food scrap collection in the Chicago region. Because the Agency represents a large number of municipalities with many residents and groups who take an active interest in waste management, public involvement was a key element of the plan development process.

During the research phase of the planning process, CB&I conducted four public meetings across the SWANCC region to provide attendees with an understanding of current waste management practices and receive questions and comments from the public regarding their satisfaction with current SWANCC programs and interest in future expanded or new programs. In addition, CB&I participated in four meetings of SWANCC's Executive Committee and three meetings of its Board of Directors to secure input from member representatives. Additional public input was secured through a scientific survey conducted by Lake Research Partners; see LRP's experience to follow for a summary of their work with SWANCC.

CB&I Personnel: *Christina Seibert (Project Manager), Phil Kowalski, Devin Moose*

Reference Contact: *Mr. David Van Vooren, Executive Director, (847) 724-9205*

Project Schedule and Budget: *May 2013-April 2014; $55,181 (excluding LRP survey)*
Completed on schedule and within budget

Solid Waste Association of North America (SWANA)
Training Course Development and Instruction

CB&I was selected by SWANA in 2011 to develop the three-day course, *Managing Integrated Solid Waste Management Systems*. The course replaced the previous *Principles of Municipal Solid Waste Management* course, and was targeted to a broad audience of current and future solid waste system managers. The course objectives include teaching the components of an integrated solid waste management system; identifying the roles and responsibilities of a manager of solid waste management systems; discussing methods and approaches to a manager's responsibilities (including planning, budgeting, contracting, and public involvement); and preparing attendees for the *Managing Integrated Solid Waste Management Systems* certification exam. CB&I worked closely with SWANA staff and its review committee to develop the course and review the certification exam. CB&I also assisted in instructing the course debut in August 2012 at Wastecon and subsequently led course instruction at Wastecon in 2013.

CB&I Personnel: *Christina Seibert (Project Manager), Devin Moose*

Reference Contact: *Patsy Timus, Director of Education and Training Programs, (240) 494-2251*

Project Schedule and Budget: *December 2011-July 2012; $30,000*
Completed on schedule and within budget

Government of the Bahamas
Training Course Series: Institutional Strengthening Program

CB&I prepared training materials and conducted training series on all aspects of solid waste management for more than 300 solid waste employees of varying experience and educational backgrounds as part of an institutional strengthening program for the Government of the Bahamas. Topics addressed included landfill design and operations, transfer station design and operations, composting, recycling and waste reduction, finance and administration, and public education and outreach. The courses were structured similar to SWANA's certification courses, with PowerPoint presentations providing the basis for the classroom presentation, with additional detail provided in a course manual.

CB&I Personnel: *Phil Kowalski, Christina Seibert, Devin Moose*

CB&I Experience - Programming and Implementation

West Cook County Solid Waste Agency, Illinois
Regional Disposal Project Design and Implementation

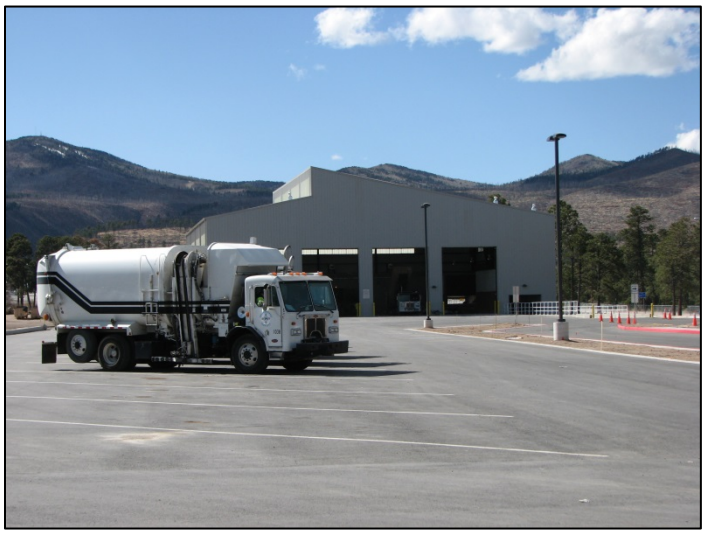
CB&I is the principal consultant for the West Cook County Solid Waste Agency (WCCSWA), a regional agency with a total of 35 municipal members representing more than 500,000 residents. Beginning in 1995, to assist WCCSWA in the implementation of its solid waste management plan CB&I staff planned and designed the Regional Disposal Project (RDP). Under the RDP, it was intended that WCCSWA member communities would jointly procure waste transfer, transport and disposal services in order to provide long-term, environmentally protective, price-stabilized disposal of residential waste. We worked with WCCSWA to obtain preliminary transfer and disposal pricing through an RFQ process in order to evaluate the economic efficiencies the RDP could provide. Based on the information gathered through the RFQ, CB&I presented details of the RDP to each of WCCSWA's member communities to secure participation in the voluntary RDP. The RDP began operating in 1997, with 21 of WCCSWA's members participating. We continue to assist the Agency to administer the contract, including performing detailed environmental audits of landfills utilized under the RDP and rebidding of the contract after its initial expiration.

CB&I Personnel: *Phil Kowalski (Project Manager), Devin Moose, Christina Seibert*

Reference Contact: *Mr. Neil James, Executive Director, (708) 453-9100*

Project Schedule and Budget: *August 1996-ongoing; $530,000 (RDP-related budget) Completed on schedule and within budget, on ongoing basis*

Los Alamos County, New Mexico
Solid Waste Plan and Eco-Station Implementation Services



CB&I has provided comprehensive solid waste services to Los Alamos County to address the mandated closure of the County's landfill. The closure of the landfill and resulting changes to the County's solid waste management system were a significant shift in historical practices. To build consensus for future options, we assisted the County and a stakeholder's group to identify replacement disposal options and select a preferred option based on County-specific conditions. To guide this process, we prepared a solid waste management plan to quantify the County's waste stream and evaluate waste diversion and disposal alternatives. We also assisted the County to screen potential sites for new landfills and transfer stations. Based on the research conducted for the solid waste management plan and the screening analysis, and the input of the stakeholder committee, it was determined the development of a transfer station facility to replace the existing landfill was the preferred option.

CB&I developed a conceptual design for the eco-station facility, which, in addition to providing waste handling capacity, was designed to incorporate curbside recyclables handling areas for transfer of recyclables to distant processing facilities and space for the collection and diversion of other waste streams, resulting in a fully integrated solid waste system operation on the eco-station campus. We secured permit approval for the eco-station from the New Mexico Environment Department, and assisted the County during final design and construction of the facility. We also provided procurement assistance to the County to secure cost-effective long-haul transportation and solid waste disposal capacity, finalizing its transition from a local, direct-haul disposal market to a regional, transfer-haul disposal operation.

CB&I Personnel: *Phil Kowalski (Project Manager), Devin Moose, Christina Seibert, Doug Allen*

Reference Contact: *Ms. Gaylyn Meyers, Engineering Project Manager, (505) 662-8136*

Project Schedule and Budget: *July 2004-August 2012; $1,400,000*
Completed on schedule and within budget

Project Innovations Experience

Ann Arbor, Michigan
Deer Management Plan

Services included consultation, facilitation, focus groups and public engagement services to support the City's development of its Deer Management Plan.

Reference Contact: *Lisa Wondrash, Communications Director, (734) 794-6152*

Project Schedule and Budget: *October 2014-April 2015; $19,860*
Completed according to schedule and budget

Ann Arbor Downtown Development Authority
Facilitation Training

Services include facilitation training workshops with the Downtown Development Authority

Reference Contact: *Susan Pollay, Executive Director, (734) 994-6697*

Project Schedule and Budget: *August-October 2015; $6,000*
Completed according to schedule and within budget

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Great Lakes Water Authority
Post-Lease Stand-Up Support Services

Project Innovations is providing post-lease stand-up activities for the newly formed Great Lakes Water Authority. The GLWA is a regional authority formed by the City of Detroit and the Counties of Macomb, Oakland, and Wayne, assuming operation and control of the Detroit-owned water and sewer system.

Reference Contact: *Eric Rothstein, Galardi Rothstein Group, (512) 422-3244*

Project Schedule and Budget: *July 2015-ongoing; $151,407*
Proceeding on schedule and within budget

Detroit Water and Sewerage Department
Wholesale Customer Outreach

Services have included developing and facilitating a wholesale water and sewer customer outreach program. Project Innovations is completing its work scope on an ongoing basis with DWSD.

Reference Contact: *Sue Coffey, Chief Planning Officer, (313) 964-9301*

Project Schedule and Budget: *March 2003-March 2006 (original) - project is ongoing; $7,570,000*
Proceeding on schedule and within budget, including DWSD issued change orders

Ann Arbor, Michigan
Sanitary Sewer Wet Weather Evaluation Project

Project Innovations facilitated a Citizens Advisory Committee as part of the City's implementation of its Sanitary Sewer Wet Weather Evaluation Project.

Reference Contact: Nick Hutchinson, City Engineer, (734) 794-6000 x 43633

Project Schedule and Budget: February 2013-December 2014; $185,700
Completed according to schedule and within budget, including a budget change order issued by Ann Arbor

Lake Research Partners Experience

Solid Waste Agency of Northern Cook County
Resident Opinion Survey to Inform Solid Waste Planning Process

In 2013, SWANCC retained Lake Research Partners to conduct a public opinion survey to understand resident opinions, satisfaction, and awareness of services provided by SWANCC. A telephone survey was conducted, securing a total of 600 survey responses from a representative cross-section of SWANCC communities and residents. Survey responses were incorporated into the Agency's 20-year solid waste management plan update and presented to SWANCC's Executive Committee and Board of Directors to support the recommendations included in the plan. Among the key findings of the survey was the identification of a very high current resident satisfaction level with existing services, interest in additional services for organics and household hazardous waste, and sensitivity to increased costs of service.

Reference Contact: Mr. David Van Vooren, Executive Director, (847) 724-9205

Project Schedule and Budget: November 2013-January 2014; $21,560
Completed on schedule and within budget

State of Michigan Agencies and Local Governments
Various Public Opinion Research

Lake Research Partners has extensive experience in Michigan, and has a wealth of experience researching the opinions of its voters. LRP has worked with the National Unity Table and is currently working with The Humane Society and the Center for Social Inclusion. In 2012, they worked with Two Peninsulas Research Group on several projects studying the opinions of voters in key races affecting the direction of the state. For several years they also served as the pollsters for Senator Debbie Stabenow, including her upset win in 2000 and tough re-election in 2006. LRP has conducted numerous surveys among Michigan voters this year on issues including the state budget, ballot initiatives, and "Right to Work" laws. Additionally, their nationwide issue research regularly includes Michigan focus groups.

LRP has polled for the Michigan Universal Health Care Access Network on health care issues statewide, giving briefings to state legislative leaders in Lansing. They have also worked on countywide health care millages, including the successful passage in 2006 of a health care millage in Genesee County.

Other work includes research for Early Childhood Investment Corporation (a program set up by Gov. Granholm to focus on preschool education in Michigan) to help build public support for wide-reaching early childhood development programs. In 2010, LRP polled for Jocelyn Benson in her race for Secretary of State. She was the top vote-getter among Democrats in Michigan. LRP's research helped her navigate a tough political environment to win support from voters who were supporting Governor Snyder at the top of the ticket.

Reference Contacts: *Linda Hamacher, President/CEO Genesee Health Plan, (810) 610-2165*

Patrick Schuh, Michigan State Director, America Votes, (517) 214-4288

San Diego, California
Landfill and Recycling Center Development Support

Lake Research Partners surveyed voters in San Diego's 5th Supervisorial District in order to measure support for the construction of the Gregory Canyon Landfill and Recycling Center. Survey findings concluded that informing voters about the benefits of such a facility is essential to gaining their support, including reduced costs and improving the local environment.

ATTACHMENT C - RESUMES

Devin A. Moose, P.E., DEE

Director

Professional Qualifications

Mr. Moose is the national head of Solid Waste Services for CB&I, and is responsible for overall administration and technical review for all environmental permitting projects, planning studies and remediation projects for CB&I solid waste projects. He supervises the planning, design and permitting of solid waste disposal facilities, including landfills, transfer stations, recycling processing centers and composting facilities. Mr. Moose also directs the development and implementation of regional solid waste management plans and manages the engineering and hydrogeological analyses for design of remediation projects, solid waste landfills, containment features, UST and LUST projects, dry cleaner sites, brownfield redevelopment projects, groundwater monitoring systems, foundations, pavements, retaining walls, and slope stability analysis. Mr. Moose supervises the development of engineers' cost estimates, economic impact studies and facility business plans; provides contract negotiation expertise for host community agreements, solid waste facility development and operating contracts; performs public presentations for solid waste plans and solid waste facilities; and provides expert witness testimony.

Education

B.S., Civil Engineering, University of Missouri-Rolla

Registrations/Certifications

- Registered Professional Engineers, Illinois, Wisconsin, Iowa, Indiana, Arizona, Ohio, New Mexico, Minnesota, and Missouri
- Diplomat of the American Academy of Environmental Engineers

Experience and Background

Total years of related experience: 32
Joined CB&I in 1996

Key Experience

- Supervised the development, completion and initial implementation of solid waste management plans for over 50 counties representing more than 7 million people. The needs assessment components of the plans included determining existing and future waste generation and recycling rates, and conducting curbside weighing programs and waste composition studies. The solid waste management plans included extensive evaluation and design of waste minimization and recycling programs. Final reports included evaluation of alternate disposal technologies and recommendation of a final integrated system for future solid waste management. The plans have received awards from the American Planning Association and the Consulting Engineers Council.

- Directed development of economic performance studies for solid waste facilities including landfills, recycling centers, transfer stations, collection vehicles, construction demolition debris recycling facilities, and recycling drop-off facilities. Analyses included waste stream analyses, market area assessments, system construction cost estimates, operating cost estimates, and calculation of financing costs. System studies included review of existing solid waste facilities, analyses and recommendations for improvement as well as comprehensive waste audits.

- Preparation of supporting data and participation in contract negotiations for solid waste facilities. Scope of work included host community benefit agreements, negotiation of special conditions for landfill and transfer station siting approval, contracts for construction and operation of waste and recycling facilities, drafting local ordinances governing landfills and transfer stations, as well as other solid waste related facilities.

- Supervised development of comprehensive local, state and federal permit applications for construction of landfills, balefills, and compost facilities. Siting and permitting activities include facility design and analyses, preparation of operating and closure plans, and interaction with permitting agencies, elected officials and members of the public. Supervised development of engineering due diligence reports for landfill acquisitions. Provided expert witness testimony and assists units of local government reviewing facilities for compliance with applicable regulations, supervised remedial action plans for numerous landfill facilities.

- Supervised the development of comprehensive local, state and federal permit applications for construction of transfer stations, recycling facilities, and recycling drop-off centers. Siting and permitting activities included facility design, site layout, equipment specification, time-motion study, expert testimony, and preparation of operating and accident prevention plans. Assisted units of local government reviewing facilities for compliance with applicable regulations. The transfer station facilities have received awards from the Consulting Engineers Council, the American Public Works Association, and the American Society of Civil Engineers. Authored and taught SWANA Course, “Transfer Station Design and Operations.”

- Managed geotechnical and hydrogeological analyses for design of solid waste landfills, containment features, groundwater monitoring systems, foundations, pavements, retaining walls, dewatering systems, slope stability analysis, monitoring well construction, field permeability testing and groundwater modeling.

- Managed the development of site locations studies for regional solid waste facilities and recycling centers. Studies included transportation analyses, development of siting criteria, public consensus building and site identification.

- Expert testimony on solid waste related facilities and studies. Expert witness testimony experience at over 50 proceedings. Development of public education programs, including information booklets, videos, power point presentations, graphics, public presentations, and field trips.

- Overall division manager providing construction quality control/quality assurance and materials testing. Trained nuclear density device and windsor probe operator. Certified by Illinois Department of Transportation in bituminous and Portland cement concrete proportioning, documentation, bridge structure foundations and traffic safety in construction zones. Experienced in Subtitle D landfill QA/QC procedures, including geomembranes, test liners, boutwell and sealed double-ringed infiltrometers. Significant experience in dewatering and geotechnical related construction projects.

- Managed site investigations and regulatory compliance activities for numerous UST and LUST projects and over 35 drycleaner site investigations and site closures. Overall responsibility for over 12 municipal brownfield redevelopment projects.

- Project officer for development of Exelon Nuclear's Excellence Plans. Project included site inspections and evaluation to determine the gaps in the environmental compliance programs of all Exelon Nuclear facilities, as well as the Kennett Square and Warrenville Corporate offices. In addition, gap analyses and environmental excellence plans for each of these nuclear facilities and corporate offices, were developed.

Selected Project Experience

Expert Testimony

- Lake Transfer Station – Expert testimony/opinion before the Village of Round Lake Park, - 9/13
- Winnebago Landfill – Expert testimony/opinion before Winnebago County – 4/12
- Peoria City/County Landfill – Expert testimony/opinion before Peoria County – 3/12
- Veolia ES Zion Landfill – Expert testimony/opinion before City of Zion – 5/10
- Russell Road Landfill/Woolworth Landfill – Expert Testimony/Opinion before the U.S.D.C. Western District of Louisiana, Shreveport Division, 1/08
- County Line Landfill – Expert Testimony/Opinion before the U.S.D.C Northern District of Indiana, South Bend Division, 10/07
- Morris Community Landfill – Deposition and hearing before the Illinois Pollution Control Board, 9/07
- Fox Moraine Landfill – Local siting proceeding before the United City of Yorkville, IL, 4/07
- Rochelle Landfill – Local siting proceeding before the City of Rochelle, IL, 2/07
- Indian Creek Landfill No. 2 – Local siting proceeding before Tazewell County, IL, 1/07
- Northlake Transfer Station – Local siting proceeding before the City of Northlake, IL, 5/06
- Virginia Road Transfer Facility – Local siting proceeding before City of Crystal Lake, IL, 3/06
- Newton County Landfill – Local zoning proceeding before Newton County, IN, 04, 05, 06, 08 ,09
- Bluff City Transfer Facility – Local siting proceeding before the City of Elgin, IL, 3/05
- Greenwood Transfer Station – Local siting proceeding, before the Village of Maywood, IL, 6/04
- Lee County Landfill – Hearing before Lee County, IL, 6/04
- Benton County Development Landfill – Proceeding before the Benton County Board of Zoning Appeals, IN, 4/04
- Freeport Transfer Station – Local siting proceeding before the City of Freeport, IL, 2/04
- West DuPage Recycling and Transfer – Local siting proceeding before DuPage County, IL, 7/03
- Livingston Landfill – Local siting proceeding before Livingston County, IL, 5/03
- Kankakee Regional Landfill– Local siting proceeding before the City of Kankakee, IL, 6/02
- Streator Area Landfill – Local siting proceeding before Livingston County, IL, 12/01

Solid Waste Management Planning

Boone County Iowa
Carroll County
Central Illinois Municipal Joint Action Agency
City of Freeport
City of Orlando
Coles County Regional Planning Comm.
Crawford County
DeKalb County
DeWitt County
DuPage County
East Central Solid Waste Commission
Grundy County
Henry County
Iowa Department of Natural Resources
JoDaviess County
Kankakee County
Lawrence County
Lee County
Livingston County
Los Alamos County, New Mexico
Mason County
Menard County
Ogle County
Richland County
Solid Waste Agency of Northern Cook County
West Central Illinois Regional Solid Waste Consortium
Will County

Landfill Design, Permitting and Due Diligence

Amoco Chemical Landfill
Belvidere Municipal Landfill No. 2
Benton County
Brickyard Disposal Landfill
CC Landfill
Clinton Landfill No. 3
Clinton Chemical Waste Unit
Coles County Landfill

Congress Development Landfill
Community Landfill
Davis Junction Landfill
Five Oaks Landfill
Fox Moraine Landfill
Freeport
Greene Valley Landfill
Herrin Municipal Landfill
H&L Landfill
Indian Creek Landfill No. 2
Kankakee Regional Landfill
Lake County C & D
LandComp Corporation Landfill
Land & Lakes 122nd Street
Lawrence County Disposal Centre Inc.
Lee County Landfill
Livingston Landfill
Los Alamos County
Mallard Lake Landfill
Marathon Oil Landfill
Midway Landfill
Morris Community Landfill
Newton County Landfill
Northwest Cook County Balefill
Peoria City/County Landfill
Pheasant Run Landfill
Prairie Hills Landfill
Rhodes Landfill
Rochelle Landfill
Rochelle Waste Disposal
Saline County Landfill
Sangamon Valley Landfill
Settlers Hill Landfill
Spoon Ridge Landfill
Streator Area Landfill
Taylor Ridge Landfill
Tazewell RDF Landfill
Various Permit Application Reviews for the City of Chicago
Department of Environment
Willow Ranch Landfill
Winnebago Landfill
Winnetka Landfill
Woodland II Landfill
Veolia ES Landfill

Transfer Station/MRF/Processing Facility Design/Permitting/Reviews

City of Batavia
Bluff City Transfer Facility
Brooks Transfer
Calumet (Liberty) Transfer
Carroll Street Transfer Station
Chicago Disposal Transfer Station
Clearing Disposal Transfer Station
Cloverleaf Transfer Station
Crown Disposal MRF/Transfer Station
DuKane Transfer Station
DuPage Co. Recycling Drop-off Centers
DuPage Yard Waste Facility
City of Freeport Transfer Station
Ellis Street Station Transfer Station
Evanston Material Recovery Center
Fullerton Station Transfer Station
Greenwood Transfer Facility
Groot Industries MRF/Transfer Station
Homewood Disposal Transfer Station
Lake Transfer Station
Northlake Transfer
Los Alamos
Loop Transfer Station \ 64th Street
Loop Transfer Station \ Laflin
City of Metropolis Transfer Station
Midtown (Hoving) Transfer Station
Midwest Compost Transfer Station
Norton Mixed Waste Processing Facility
Onyx Batavia Transfer Station
Onyx Evanston Transfer Station
Planet Recovery (National)
Rolling Meadows Transfer Station
Solid Waste Authority of Central Ohio
Speelman Transfer Station
Virginia Road Transfer Facility
West DuPage Transfer Station
Wheeling Township Transfer Station
Various Permit Application Reviews for the City of Chicago
Department of Environment

Hydrogeologic/Geotechnical Investigations

Belvidere Municipal Landfill No. 2
Brickyard Disposal Landfill
Burr Ridge Park
CC Landfill
Chicago Deep Tunnel Project
Danville Landfill
Five Oaks Landfill
Fox Moraine Landfill
Herrin Municipal Landfill
Indian Creek No. 2
Kankakee Regional Landfill
LandComp Corporation Landfill
Lee County Landfill
Little Calumet Borrow Area Investigation
Livingston Landfill

Marathon Oil Landfill
Newton County Landfill
New Milford Landfill
North-South Tollway
Northwest Cook County Balefill
Peoria City /County Landfill
Rhodes Landfill
Saline County Landfill
Streator Area Landfill
Winnebago Landfill
Veolia ES Zion Landfill

Regional Site Location Studies

Northern Cook County
DuPage County
Kane County
Kendall County
Will County
Lake County

Economic and Performance Studies

Brickyard Disposal Pro Forma
Business Plan, Private Transfer Station
City of Chicago Anaerobic Digestion
DuPage County Drop-off Centers
Essex Windsor
Evanston MRF Business Plan
Groot Industries Transfer Station/MRF
LandComp Corporation
Los Alamos County
Nord MRF Business Plan
Northwest Cook County Balefill
Regional Disposal Project
SWANCC Transfer Station No. 1
Solid Waste Authority Balefill Feasibility Analysis
West Cook County Solid Waste Agency
Wheeling Township Transfer Station
Will County Arsenal Site

Contract Negotiation and Procurement

Bond County Landfill Siting Review
City of Batavia Host Community Agreement
City of Chicago Dept. of Environment Rules and Regulations
City of Freeport Contract Procurement
City of Freeport Hauling Lease and Host Agreements
Coles County Landfill Siting Review
Crystal Lake Transfer Station
DeWitt County Host Community Agreement
Douglas Co. Waste Disposal Agreement
Greenwood Transfer Facility
Henry County Host Community Agreement
Jackson Co. Host Community Agreement
Jackson Co. Landfill Siting Review
Land Purchase Negotiations for Wheeling Township Transfer Station
LaSalle Co. Host Community Agreement
Lawrence Co. Host Community Agreement
Village of Lyons Annexation Agreement
Lawrence Co. Landfill Siting Review
Lee Co. Landfill Ordinance
Livingston Co. Host Community Agreement
Livingston Co. Landfill Siting Review
Livingston Co. Landfill Ordinance
Ogle Co. Host Community Agreement
Ogle Co. Landfill Siting Review
Ogle Co. Landfill Ordinance
Operating Contract for Wheeling Township Transfer Station
Regional Disposal Project, West Cook County Solid Waste Agency
Richland Co. Host Community Agreement
Solid Waste Agency of Northern Cook County
West Cook Co. Solid Waste Agency Regional Disposal Project
Will County Landfill Siting Review and Source Reduction Manua

Public Education

BFI Davis Junction Landfill
Barrington Composting Facility
Belvidere/Boone County Newsletter
Benton County Landfill
City of Freeport
CC Landfill
Crystal Lake
D&L Landfill
DuKane Transfer Station
Ellis Street Station
Fox Moraine Landfill
Bluff City Transfer Facility
Greenwood Transfer Facility
Groot Industries Transfer Station
Illinois Recycling Association Waste Audit
Northwest Cook County Balefill Video
Indian Creek Landfill No. 2
Iowa Department of Natural Resources
Jackson County Landfill and Source Reduction Manual

Kankakee Regional Landfill
Lake County C & D Facility
LandComp Corp. Information Booklet
Lawrence County Disposal Centre
Lee County Landfill
Livingston County Landfill
Morris Community Landfill
Newton County Landfill
Onyx Batavia Transfer Station
Rochelle Landfill
SWANCC Transfer Station No. 1
SWANCC Waste Audit Manual
Streator Area Landfill
Bahamas Ministry of Health
West Cook Co. Regional Disposal Project Brochure
Wheeling Township Transfer Station
Will County Siting Study
Willow Ranch Landfill

Construction Oversight / Material Testing
Brickyard Disposal
Burr Ridge Office Park
Highland Green Subdivision
H.J. Thomas Memorial Hospital
Northwest Community Hospital
Pinebrook Subdivision
Rush, Presbyterian, St. Luke's Hospital
Sherman Hospital
St. Charles Road Improvements
St. Luke's Hospital
Swedish Covenant Hospital
Washington Street Improvements
Woodland II Landfill
York Road Improvements

Brownfield Projects
Alcoa
City of Chicago
City of St. Charles
City of Woodstock
Village of Broadview
Village of Crete
City of Dixon
City of Hoopeston
Village of Justice
City of Mendota
Village of Brookfield
Village of Palatine
Village of Schaumburg
Village of Bellwood
Village of Lombard
Village of Roselle
Village of Skokie
Village of Wheeling
Walsh Development
Will County
Yazoo Landfill
City of Naperville

Professional Affiliations

- American Academy of Environmental Engineers
- American Society of Civil Engineers
- Solid Waste Assoc. of North America
- National Society of Professional Engineers
- Illinois Society of Professional Engineers
- Association of Engineering Geologists
- National Groundwater Association
- Illinois Recycling Association

Publications & Professional Association Presentations

- "Effects of Sampling Disturbance on Shear Strength of Glacial Till and Compacted Fill**,"** Dietzler, D. P., Moose, D.A., and Schuh, J. C., *Advanced Triaxial Testing of Soil and Rock, ASTM STP 977*, Robert T. Donaghe, Ronald C. Chaney, and Marshall L. Silver, Eds., American Society for Testing and Materials, Philadelphia, 1988, pp. 628-641.

- "Transfer Station Practices: Transfer Station Workshop Part 1: Pros & Cons of Building Your Own," Invited Session Speakers: Devin Moose, Envirogen; Steve Taylor, Republic Services, Inc. Waste Expo, 2003

Phillip P. Kowalski

Senior Solid Waste Planner

Professional Qualifications

As Senior Planner, Mr. Kowalski is responsible for conducting regulatory, statistical and economic analyses as part of a multi-discipline engineering project team. He prepares permit applications, solid waste needs assessments, and solid waste management plans. Mr. Kowalski also performs economic feasibility studies and develops project cost estimates, and develops business plans and marketing plans for waste facilities. Mr. Kowalski also assists public and private clients on procurement of solid waste services.

Education

M.B.A., Graduate School of Business, University of Chicago
B.A., Physics, University of Chicago

Experience and Background

Total years of related experience: 27
Joined CB&I in 1996

Key Experience

- *Kuusakoski Recycling/Peoria Disposal Company*
  Co-author of CRT White Paper to quantify and analyze the quantities of CRT devices generated and the available processing capacity to manage CRT glass. Work included developing nationwide estimates of CRT devices to be recovered and managed on an annual basis; summarizing state-level legislation and impacts on recovery of CRTs; quantifying existing end-use processing capacity available to manage CRTs; and assessing economics of existing processing options. Prepared a CRT White Paper Update to further assess market conditions and developments in CRT management during the one-year period following the initial CRT White Paper. Assisted Kuusakoski and PDC to develop a petition to the Basel Action Network to recognize retrievable storage of CRT glass as an allowed management method under the e-Stewards certification process.

- *West Cook County Solid Waste Agency*
  Prime consultant to consortium of 36 communities representing over 500,000 residents. Managed comprehensive feasibility analysis of alternate waste management technologies, including wet/dry collection systems and intensive recycling methods. Evaluation criteria included technical feasibility, applicability to the waste stream, economics, financing requirements, facility requirements, siting and permitting requirements, and health and safety impacts. Assisted Agency in implementing Regional Disposal Project, a cooperative municipal effort to secure interim transfer, transport, and disposal capacity. Prepared Request for Qualifications and Request for Proposals. Prepared marketing materials to secure participation by member communities of the Agency. Met with Agency staff and municipal officials to develop and implement Project strategy. Prepared benchmark evaluation of RDP to assess effectiveness of the program after 10 years of operation.

Solid Waste Agency of Northern Cook County (SWANCC)
Prepared solid waste needs assessment and solid waste management plan for consortium of 23 municipalities representing 700,000 residents. Prepared elements of local siting and IEPA permit applications relating to waste quantities, facility need, and facility size requirements for landfill facility and three transfer stations. Assisted in managing project team of engineers, environmental scientists, attorneys, land use planners, and real estate appraisers to prepare 2000+ page 404 permit application to the U.S. Army Corps of Engineers. Performed economic analysis to assess competitiveness of (SWANCC) waste system with other disposal alternatives. Developed cost estimates and waste projections used to secure financing. Assisted the Agency to prepare a 20-Year Update to its Solid Waste Management Plan. Advised SWANCC during procurement of operations, transport and disposal services for the Glenview Transfer Station; new contract will provide approximately $2.5 million in annual savings for the member communities.

- *Solid Waste Agency of Lake County (SWALCO)*
  Prepared updated estimates of waste generation and inventory of solid waste handling methods for consortium of 43 communities representing 700,000 residents as part of the 20-Year Update to SWALCO's solid waste management plan.

- *Orange County Utilities, Florida*
  Managed a Solid Waste System study to evaluate operational efficiencies and identify potential cost savings for a publicly-owned waste system. The system consists of two landfills, two transfer stations, a MRF, a composting facility, and ancillary facilities and programs. The study included a market assessment to benchmark the cost performance of the system against other public and private solid waste systems, a regional assessment of waste quantities, an operations review, and a financial review. Based on the recommendations in the study, the County is projected to reduce its tipping fees by 16-23 percent versus current tipping fees for residential and commercial waste, resulting in significant cost savings for customers.

- *City of Orlando, Florida*
  Project planner on multi-discipline team assisting the City to evaluate and review waste conversion technologies and procure a technology vendor to design, build, own and operate a conversion facility to provide a source of renewable energy and reduce landfill disposal quantities. Assisted with a market assessment to characterize waste quantities and composition within the City of Orlando and Orange County that could be directed to a conversion facility. Assisted the City to draft procurement materials to solicit a facility developer in the future.

- *City of Doral, Florida*
  Assisted the City of Doral to review proposed amendments to the zoning ordinance of a neighboring community (Town of Medley) governing solid waste facilities. Prepared a white paper to educate planning staff in Doral about the different types of facilities, what such facilities look like, the pros and cons of different types of facilities, and the potential issues that have to be addressed in the development and operation of such facilities. Assisted the City to review the proposed zoning amendments and develop recommendations to submit to the Town of Medley for inclusion in the new ordinance. Based on this review work, the City of Doral made several suggestions to the Town of Medley. Also assisted the City to evaluate a proposal from a not-for-profit organization to develop an in-vessel composting facility for food waste and yard waste.

- *Kern County Waste Management Department, California*
  Managed a transfer station feasibility evaluation for Kern County and the City of Bakersfield to assess the economic viability and air quality imparts of transfer stations to serve the metro-Bakersfield area. The purpose of the study was to develop conceptual plans for transfer stations under a number of development scenarios, to estimate capital and operating costs for the transfer stations, to perform an

economic comparison of transfer haul versus the existing system of direct haul to landfills, and to model the improvements to air quality from transfer haul.

- *Kern County Waste Management Department, California*
  Managed a study to evaluate the feasibility of adding a Dirty-MRF operation to an existing transfer station facility. Performed research into the diversion rates achieved by Dirty-MRF facilities and other design parameters. Managed design of conceptual Dirty-MRF facility taking into account waste composition and waste throughput. Prepared capital and operating cost estimates. Developed benchmark cost estimates of existing diversion programs for comparison to the costs of the Dirty-MRF. Evaluated operational enhancements to increase diversion at the existing transfer station as alternatives to the Dirty-MRF.

- *Los Alamos County, New Mexico*
  Managed multi-discipline project team to provide comprehensive solid waste consulting services to Los Alamos County. Projects have included preparing a solid waste management plan, performing feasibility evaluations of potential landfill and transfer station sites, preparing a conceptual design and permit application for a transfer station, preparing a closure plan for an existing landfill, assisting with the final architectural and engineering plans for the transfer station, and assisting with the procurement of solid waste transport and disposal services. Managed study to evaluate alternative landfill cover systems that would facilitate development of a solar-energy end use project on the closed landfill.

- *City of Spokane Valley, Washington*
  Assisted the City of Spokane Valley to evaluate waste transfer, recycling and disposal options and to procure transfer and disposal services. A limited timeframe was available to secure a contract for transfer and disposal services, resulting in the City opting to proceed directly with negotiations in lieu of conducting an RFP process. Developed financial models to assess potential cost impacts to the City of various options related to the use of alternative transfer station options. Upon commencement of negotiations, the models provided the basis for negotiating reduced pricing from the private contractor. As a result of the negotiation process, the City secured savings of $12 per ton compared to its current services.

- *Essex Windsor Solid Waste Authority (Ontario)*
  Managed comprehensive feasibility analysis comparing solid waste baling with conventional landfilling. Technical feasibility report examined issues of compaction, leachate and gas generation, equipment reliability, personnel needs, and equipment requirements. Economic feasibility reports examined unit costs (e.g. cost per ton) of baling as well as the life cycle costs of developing a regional landfill as a balefill versus a conventional landfill. Met regularly with a stakeholders group to review the study and develop public consensus as the study was prepared.

- *East Central Solid Waste Commission, Minnesota*
  Assisted five-county group representing approximately 140,000 residents to prepare strategic business plan to address future disposal alternatives. Researched data on waste generation and management trends in the five-county region and Minnesota. Developed financial projections of disposal alternatives. Performed market research into competitive conditions in east central region. Interviewed numerous stakeholders including elected officials, county and municipal staff, haulers, regulatory agencies, and local citizens to gain local perspective on alternatives. Assisted Commission staff with contract issues and Certificate of Need request.

- *Progressive Waste Solutions Procurement Assistance, Louisiana*
  Lead planner assisting private waste company to prepare a successful proposal for development and operation of Phase 4A of the Jefferson Parish Landfill. Proposal included development of qualifications and demonstration of experience in similar projects in Louisiana, as well as knowledge of Louisiana regulations. Identified the scope of services to be performed and developed a comprehensive transition plan to facilitate the shift in operations from the current operator to Progressive.

- *Peoria Disposal Company Procurement Assistance*
  Lead planner assisting private waste company to prepare a successful proposal to develop and operation of an expansion to the Peoria City/County Landfill. Also assisted company to prepare successful proposal to City of Peoria for waste, recycling and landscape waste collection services. Both proposals included preparation of summary qualifications information, identification of the scope of work to be provided, economic analysis to establish proposal pricing, and identification of the elements of project implementation.

- *Boone County, Iowa*
  Managed a feasibility analysis of construction/demolition waste recycling opportunities and municipal waste composting technologies.

- *West Central Municipal Conference*
  Assisted Conference of 36 communities to implement a Brownfields Pilot Project. Supervised development of a Request for Statements of Developer Interest to solicit property owners to participate in the Pilot Project. Developed marketing materials to publicize the Project.

- *Grundy County*
  Designed statistical weighing program to determine household quantities generated in this rural county of 36,000. Developed computer models to forecast waste quantities. Analyzed impacts of demographic trends in the area on waste quantities. Co-authored Grundy County solid waste management plan, focusing on recycling and the economics of the recommended plan.

- *Lee County*
  Prepared solid waste management plan for County of 36,000. Presented technical and economic information during monthly citizen advisory committee meetings.

- *Ogle County*
  Prepared solid waste needs assessment for County of 50,000. Developed and implemented a statistical based weighing program to determine the composition of residential and commercial waste in the County. Prepared elements of the County's solid waste management plan, focusing on recycling and plan economics.

- *Will County*
  Conducted study to determine residential, commercial, and industrial waste quantities generated by the 350,000 residents of the County. Developed models to forecast waste quantities. Prepared elements of the County's solid waste management plan, including an economic analysis of landfill alternatives.

- *Bridgewater Resources, New Jersey*
  Conducted analysis of solid waste market in New Jersey for financial restructuring of transfer station. Researched waste disposal quantities in marketplace. Analyzed available solid waste transfer and disposal capacity at competing facilities. Reviewed proforma financial projections.

- *Brickyard Disposal and Recycling*
  Prepared proforma financial analysis of landfill expansion. Supervised preparation of earthwork and volume calculations. Developed initial construction cost estimates, including demolition of existing structures, relocation of utilities, and mass earthwork. Prepared projectional income and cash flow statements for different tonnage throughput scenarios.

- *Allied Waste Industries*
  Prepared proforma financial analysis of existing landfill and expansion. Supervised preparation of earthwork and volume calculations. Developed initial construction cost estimates, including mass earthwork. Prepared projectional income and cash flow statements for alternate landfill designs and tonnage throughput scenarios.

- *LandComp Corporation*
  Represented private landfill operator during County's evaluation of landfill ownership alternatives. Prepared position reports and presented testimony at public hearings addressing the role of privately-owned landfills in the County. Assisted LandComp in developing proposal submitted during the County's competitive procurement process to select a preferred landfill vendor. Provided expert witness testimony during landfill siting process.

- *Browning-Ferris Industries*
  Developed promotional brochure and other graphical materials for a competitive landfill procurement. Developed strategic marketing materials for client's internal use, including market share analysis.

- *City of Freeport*
  Assisted City to procure operator for new transfer station. Provided consulting services during development of procurement documents including lease agreement, host agreement and hauling agreement. Conducted pre-proposal meeting with vendors.

- *Henry County*
  Represented County during host agreement negotiations.

- *Lawrence County*
  Provided host agreement consulting services to County.

- *Private Real Estate Developer*
  Performed cost analysis of existing transfer station operation as part of property negotiation. Developed proforma income statements and performed discounted cash flow analysis.

- *Douglas County*
  Prepared study to assess the economic impact, in terms of increased transportation costs, of the closure of the only landfill in the County. Developed waste forecasts and cost projections of transporting the County's waste to neighboring landfill facilities.

- *Winnebago Reclamation Service (Winnebago Landfill)*
  Assisted in preparing needs assessment and plan consistency reports for application for local sitting approval for a landfill expansion.

- *Kankakee Regional Landfill, LLC (Kankakee Regional Landfill)*
  Prepared needs assessment report for application for local sitting approval. Provided expert witness testimony.

- *Allied Waste Industries (Sarona Landfill)*
  Provided peer review assistance to client for landfill expansion. Reviewed needs analysis included in landfill permit application.

- *Allied Waste Industries (Lee County Landfill)*
  Assisted in preparing needs assessment and plan consistency reports for application for local sitting approval for a landfill expansion.

- *Allied Waste Industries (Livingston Landfill)*
  Prepared needs assessment and plan consistency reports for application for local sitting approval for a landfill expansion. Provided expert witness testimony.

- *Allied Waste Industries (EnvironTech Landfill)*
  Prepared needs assessment and plan consistency reports for application for local sitting approval for a landfill expansion. Provided expert witness testimony.

- *Allied Waste Industries (Streator Landfill)*
  Prepared needs assessment and plan consistency reports for application for local sitting approval for a landfill expansion. Provided expert witness testimony.

- *Allied Waste Industries (CC Landfill)*
  Prepared needs assessment report for application for local sitting approval for a landfill expansion. Provided expert witness testimony.

- *Browning Ferris Industries (Orchard Hills Landfill)*
  Prepared needs assessment and plan consistency reports for application for local sitting approval for a landfill expansion. Provided expert witness testimony.

- *Allied Waste Industries (Northlake Transfer Station)*
  Assisted in preparing needs assessment and plan consistency reports for application for local siting approval for a 1,500 ton per day transfer station.

- *Waste Management of Illinois (Bluff City Transfer Station)*
  Assisted in preparing needs assessment and plan consistency reports for application for local siting approval for a 2,000 ton per day transfer station.

- *Waste Management of Illinois (Crystal Lake Transfer Station)*
  Assisted in preparing needs assessment and plan consistency reports for application for local siting approval for a 1,000 ton per day transfer station.

- *Roy Strom Refuse Removal Services (Greenwood Transfer Station)*
  Prepared needs assessment and plan consistency reports for application for local siting approval for a 1,000 ton per day transfer station. Provided expert witness testimony.

- *West DuPage Recycling and Disposal (West DuPage Transfer Station)*
  Prepared needs assessment and plan consistency reports for application for local siting approval for a 1,000 ton per day transfer station. Provided expert witness testimony.

- *Allied Waste Industries (Chicago Transfer Stations)*
  Prepared zoning applications and permit applications for multiple transfer stations in the City of Chicago.

- *Browning Ferris Industries (DuKane Transfer Station)*
  Prepared needs assessment and plan consistency reports for application for local siting approval for a 1,500 tpd transfer station. Provided expert witness testimony.

- *Speedway Recycling & Disposal (Ellis Street Transfer Station)*
  Prepared needs assessment and plan consistency reports for application for local siting approval for a 500 tpd transfer station. Provided expert witness testimony.

- *Norton Environmental (Wood River Transfer/Recycling Facility)*
  Prepared needs assessment for siting application for mixed waste processing facility and transfer station. Performed economic assessment of mixed waste versus source separated recycling.

- *Groot Industries*
  Prepared variance and special use zoning application for vehicle maintenance and container storage facility.

- *Ministry of Environment, Bahamas / SABL, Ltd.*
  Managed project team that is assisting a Bahamian consulting company to provide solid waste training services to the Ministry of Environment of the Government of the Bahamas. Prepared training materials and conducted class-room training sessions for a comprehensive range of solid waste disciplines including transfer stations, recycling, composting, landfill gas and leachate management, public education, and finance/administration.

- *Newton County Landfill*
  Prepared evaluation of economic impacts of landfill on local economy including host fees, taxes, wages and employment, and landfill purchases of supplies and services. Assisted client to evaluate economic development opportunities in connection with beneficial reuse of landfill gas. Researched economic development assistance programs available through local, state and federal agencies. Developed media presentation materials to explain landfill gas management technologies and case studies of landfill gas recovery projects.

- *Village of Skokie*
  Prepared assessment of funding opportunities for Brownfields redevelopment.

- *City of Chicago, Dept. of Environment*
  Coordinated the development of a comprehensive environmental compliance system, including drafting of rules and regulations for different types of solid waste facilities, preparation of recycling education materials, and development of an inspection training manual.

- *Private Industry Council of Northern Cook County*
  Developed marketing plan for a commercial recycling program implemented by a not-for-profit institution. Analyzed available recyclable material quantities, potential sources of competition, and the competitive strengths and weaknesses of the institution as a participant in the recycling industry. Recommended implementation strategies for securing materials from commercial establishments.

- *Chicago Housing Authority*
  Developed business plan for pilot buy-back recycling program sponsored by the (CHA). Assessed the amount of recyclable material recoverable from CHA developments, and prepared forecasts of the costs and revenues of operating the program on a pilot as well as a CHA-wide basis. Developed and implemented waste sorting program to determine the quantities of recyclable material.

- *Northern Illinois University*
  Supervised drafting of bid specifications for solid waste collection, recycling, and disposal services for public university with student enrollment of 25,000. Performed review of vendor bids.

- *City of Evanston MRF*
  Prepared economic feasibility study and business plan for 10,000 square foot, $1.2 million recycling facility. Developed forecasts of material prices, facility revenues and expenses. Recommended operating procedures to minimize risk from volatile material prices. Obtained $50,000 in grant financing for the City from the Illinois Department of Energy and Natural Resources.

Christina M. Seibert

Solid Waste Planner / Environmental Scientist

Professional Qualifications

As a solid waste planner, Ms. Seibert is responsible for evaluating technical, regulatory, and economic feasibility of existing and proposed solid waste programs and facilities. Ms. Seibert is also responsible for the development of local solid waste management plans. She performs public outreach to support plan development and implementation and directs the development and execution of public education and training programs. She assists with the siting, design, and permitting of solid waste management facilities, including both disposal and diversion facilities.

Education

B.S., Environmental Science, University of Iowa

Experience and Background

Total years of related experience: 15
Joined CB&I in 2001

Key Experience

- *Solid Waste Association of North America*
  Primary author of the new "Managing Integrated Solid Waste Management Systems" training course, consisting of PowerPoint materials, a student course manual, and an instructor's guide. The 3-day training course is intended to prepare solid waste system managers for the Integrated Solid Waste Management certification exam. The course provides a comprehensive study of all aspects of planning and managing integrated solid waste systems. Topics covered include a review of design and operating aspects f all types of solid waste management technologies, planning, budgeting, funding, procurement, and public education. Instructed the course debut with 25 attendees.

  Prepared an update to the "Managing Transfer Station Systems" training course. The update included preparation of PowerPoint materials and a course manual for the 2 ½ day training course. Topics covered include transfer system planning evaluations, design and operating considerations, equipment requirements, and personnel training and safety considerations. Reviewed the certification exam offered by SWANA for consistency with course materials.

- *Illinois Recycling Association / Illinois Department of Commerce and Economic Opportunity Recycling Toolkit*
  Project manager responsible for development of an online workplace recycling toolkit to assist businesses, schools and institutions to evaluate and implement waste reduction activities. Developed a comprehensive guidance document, including extensive resource materials. Prepared workshop training materials for a series of statewide workshops. Presented a series of 2-hour workshops to more than 300 businesses and local waste and recycling coordinators on the elements of the toolkit.

- *Kuusakoski Recycling / Peoria Disposal Company*
  Project manager responsible for researching and developing a market assessment of cathode ray tube (CRT) devices. Work included developing nationwide estimates of CRT devices to be recovered and managed on an annual basis; summarizing state-level legislation and impacts on recovery of CRTs; quantifying existing end-use processing capacity available to manage CRTs; and assessing economics of existing processing options. Developed a white paper summarizing the research findings and

presenting an alternative end-use market, developed by Kuusakoski Recycling and Peoria Disposal Company. Prepared a one-year update to the white paper. Assisted in preparing a petition to the Basel Action Network requesting modification of its e-Stewards certification standard to allow treated CRT glass to be placed in a retrievable storage cell in a permitted landfill. Authored Illinois House and Illinois Senate resolutions passed without changes urging the Basel Action Network to approve the petition.

- *Solid Waste Agency of Lake County (SWALCO)*
  Project manager for development of updated estimates of waste generation and inventory of solid waste handling methods for consortium of 43 communities representing 700,000 residents as part of the 4th 5-Year Update to SWALCO's solid waste management plan. Presented information both in report format for the plan and in a public meeting for SWALCO's 60% Recycling Task Force to assist in plan implementation.

- *Progressive Waste Solutions Procurement Assistance*
  Project manager responsible for preparing successful proposal for development and operation of Phase 4A of the Jefferson Parish Landfill. Proposal included development of qualifications and demonstration of experience in similar projects in Louisiana, as well as knowledge of Louisiana regulations. Identified the scope of services to be performed and developed a comprehensive transition plan to facilitate the shift in operations from the current operator to Progressive.

- *Peoria Disposal Company Procurement Assistance*
  Project manager responsible for preparing successful proposal for development and operation of an expansion to the Peoria City/County Landfill. Also prepared successful proposal to City of Peoria for waste, recycling and landscape waste collection services. Both proposals included preparation of summary qualifications information, identification of the scope of work to be provided, economic analysis to establish proposal pricing, and identification of the elements of project implementation.

- *LaSalle County, Illinois*
  Project manager for development of 20-year update to the County solid waste management plan. Developed updated estimates of waste generation and performed waste flows analysis to assess the waste and diversion practices in place. Evaluated disposal and diversion alternatives and assessed existing ordinances for applicability to the County's waste stream. Facilitated meetings of the Citizens' Advisory Committee to secure stakeholder input during the plan development process.

- *City of Chicago Department of Environment*
  Completed a feasibility evaluation of converting a former concrete grain silo complex to an anaerobic digestion facility. Evaluated technology vendor information to assess technical and economic feasibility of AD technology and applicability to the existing structure. Managed the structural investigation of the silos and equipment evaluation completed by subcontractors. Assisted in the preparation of the final report presented to CDOE.

- *Groot Industries / Lake Transfer Station*
  Project planner responsible for developing needs assessment for proposed 750 tons per day transfer station, including conducting research into waste disposal quantities and trends and performing analysis of transportation costs. Also prepared life-cycle assessment to estimate annual fuel consumption and emissions of nitrogen oxides, sulfur oxides, and carbon dioxide, demonstrating the transfer station will result in a superior system to the current system.

- *Iowa Department of Natural Resources*
  Developed cost model to represent costs of constructing and operating a transfer station to handle an average 30 tons per day. Developed presentation materials for outreach workshops with county representatives and engineering consultants to identify waste handling options as local landfills close.

- *Ministry of Environment, Bahamas / SABL, Ltd.*
  Prepared training materials to educate employees of the Department of Environmental Health Services on solid waste topics including recycling, transfer stations, and finance/administration. Conducted classroom training for recycling basics session.

- *Reliable Materials / Reliable Asphalt Corporation*
  Prepared grant applications to Illinois Department of Commerce and Economic Opportunity for two proposed multi-million dollar green industry projects. Grant funding is being provided by the state's Green Industry Business Development Program through the use of American Recovery and Reinvestment Act (ARRA) funds.

- *Peoria Disposal Company Grant Assistance*
  Prepared grant applications to Illinois Department of Commerce and Economic Opportunity under its Traditional Recyclables grant program to purchase wheeled recycling carts to enhance existing curbside collection programs in two communities.

- *City of Ridgecrest, California*
  Assisted in feasibility assessment of a material recovery facility (MRF). Researched MRF diversion rates in California and nationwide and prepared cost estimates for facility design and operations options. Assisted in completion of the final feasibility report.

- *Chicago Composts, LLC*
  Prepared successful grant application to Illinois Department of Commerce and Economic Opportunity to fund feasibility assessment for a proposed food waste composting facility. Assisted in the development of a business plan for the proposed facility.

- *City of Philadelphia Streets Department*
  Project manager for evaluation of waste collection franchise systems for the City's commercial waste stream. Evaluation consists of researching franchise systems in place in other communities, assessing current local waste and recycling collection conditions, and developing implementation tools and estimated economic impacts for the City's selected system.

- *City of Orlando*
  Project manager responsible for assisting the City to evaluate and review waste conversion technologies and procure a technology vendor to design, build, own and operate a conversion facility to provide a source of renewable energy and reduce landfill disposal quantities. Completed a market assessment to characterize waste quantities and composition within the City of Orlando and Orange County that could be directed to a conversion facility. Assisted the City to draft procurement materials to solicit a facility developer in the future.

- *Winnebago Landfill*
  Prepared needs assessment for proposed expansion of the Winnebago Landfill near Rockford, Illinois. Analyzed trends in waste generation, disposal capacity, and the regional waste market. Assessed economic impact of the proposed expansion and neighboring environmental campus proposed to include recycling, processing, and waste-to-energy operations. Prepared report of consistency with the Winnebago County Solid Waste Management Plan. Provided expert witness testimony as part of the local siting approval process.

- *Quad Cities Landfill*
  Prepared needs assessment for proposed expansion of the Quad Cities Landfill near Milan, Illinois. Analyzed trends in waste generation, disposal capacity, and the regional waste market. Performed economic assessment of landfill development, including impact of host fees, employment and wages, local purchases and overall impact of project on local economy. Prepared report of consistency with the Rock Island County Solid Waste Management Plan.

- *Fox Moraine Landfill*
  Assisted in preparation of needs assessment for proposed new landfill in Yorkville, Illinois. Analyzed trends in waste generation, disposal capacity, and the regional waste market.

- *Indian Creek Landfill No. 2*
  Prepared needs assessment for proposed expansion of the Indian Creek Landfill No. 2 near Hopedale, Illinois. Analyzed trends in waste generation, disposal capacity, and the regional waste market. Performed economic assessment of landfill development, including impact of host fees, employment and wages, local purchases and overall impact of project on local economy. Prepared report of consistency with the Tazewell County Solid Waste Management Plan.

- *City of Rochelle, Illinois*
  Prepared needs assessment for proposed expansion of the Rochelle Municipal Landfill #2 in the City of Rochelle, Illinois. Analyzed trends in waste generation, disposal capacity, and the regional waste market.

- *Newton County Landfill*
  Performed economic analysis of host fees and prepared projections of the economic impact of the landfill on the local economy. Prepared report documenting compliance with requirements for special use criteria to allow expansion of the existing Newton County Landfill in Newton County, Indiana. Assisted in preparation for hearings before the Board of Zoning Appeals for Newton County for the landfill expansion. Prepared demonstration of need report for three state permit applications requesting approval of expansion.

- *Lake County C&D Landfill*
  Prepared demonstration of need report for state permit application requesting approval of the expansion of a construction and demolition debris landfill.

- *Livingston Landfill*
  Prepared needs assessment for proposed expansion of the Livingston Landfill in Pontiac, Illinois. Analyzed trends in waste generation, disposal capacity, and the regional waste market. Performed economic assessment of landfill development, including impact of host fees, employment and wages, local purchases and overall impact of project on local economy. Prepared report of consistency with the Livingston County Solid Waste Management Plan.

- *Lee County Landfill*
  Prepared needs assessment for proposed expansion of the Lee County Landfill in Dixon, Illinois. Analyzed trends in waste generation, disposal capacity, and the regional waste market. Performed economic assessment of landfill development, including impact of host fees, employment and wages, local purchases and overall impact of project on local economy. Prepared report of consistency with the Lee County Solid Waste Management Plan. Provided expert witness testimony.

- *Streator Area Landfill #3*
  Assisted in preparation of application for local siting approval for proposed expansion. Performed economic assessment of landfill development, including impact of host fees, employment and wages, local purchases and overall impact of project on local economy.

- *Kankakee Regional Landfill*
  Prepared needs assessment for proposed new landfill in Kankakee, Illinois. Prepared report of consistency with the Kankakee County Solid Waste Management Plan. Also assisted in preparation of other aspects of the application for local siting approval, including conceptual design, closure/post closure care plan, construction quality assurance, and health and safety plan.

- *Northlake Transfer*
  Project manager responsible for daily oversight and management of preparation of application for local siting approval for a proposed transfer station in Northlake, Illinois. Prepared needs assessment, including conducting research into waste disposal trends and performing analysis of transportation costs. Prepared report of consistency with the Cook County Solid Waste Management Plan. Provided expert witness testimony.

- *Virginia Road Transfer Facility*
  Prepared needs assessment for a proposed transfer station in Crystal Lake, Illinois. Conducted research into waste disposal trends and analysis of transportation costs. Prepared report of consistency with the McHenry County Solid Waste Management Plan.

- *Bluff City Transfer Facility*
  Prepared needs assessment for a proposed transfer station in Elgin, Illinois. Conducted research into waste disposal trends and analysis of transportation costs. Prepared report of consistency with the Cook County Solid Waste Management Plan. Provided expert witness testimony.

- *Village of Carol Stream, Illinois*
  Conducted review of needs assessment and plan consistency reports for proposed Fullerton Transfer Station.

- *City of Freeport, Illinois*
  Performed a pre-file review of a proposed transfer station in the City. Also prepared needs assessment for a proposed transfer station, including research into waste disposal trends and analysis of transportation costs. Prepared report of consistency with the Stephenson County Solid Waste Management Plan. Provided expert witness testimony.

- *Spaulding Road Transfer Station*
  Prepared needs assessment for a proposed transfer station, including research into waste disposal trends and analysis of transportation costs. Prepared report of consistency with the Cook County Solid Waste Management Plan.

- *Greenwood Transfer Facility*
  Prepared needs assessment for a proposed transfer station, including research into waste disposal trends and analysis of transportation costs. Assisted in supervising development of application for local siting approval. Prepared report of consistency with the West Cook County Solid Waste Management Plan. Assisted in preparation of IEPA development permit application. Prepared IEPA operating permit application.

- *West DuPage Recycling and Transfer Facility*
  Prepared needs assessment for a proposed transfer station, including research into waste disposal trends and analysis of transportation costs. Prepared report of consistency with the DuPage County Solid Waste Management Plan.

- *Solid Waste Agency of Northern Cook County (SWANCC)*
  Assisted SWANCC to conduct a transfer station market analysis for the northern Cook County region. The analysis considered waste disposal tonnages, competing transfer stations, and the patterns of waste handling in the region. Information collected for the analysis included historical facility throughputs for competing transfer stations, residential collection contracts, and municipal hauler licenses. Disposal fees at competing facilities were evaluated, as well as contract disposal rates for other public agencies.

- *Calhoun County, Michigan*
  Developed a strategic plan to provide guidance to the solid waste department and Solid Waste Management Planning Committee to implement waste reduction and diversion programs. Plan development included input from County Commissioners, Planning Committee members, and local stakeholders through a series of public meetings.

- *Wexford County, Michigan*
  Assisted in conducting a benchmarking review of the Wexford County Landfill. Conducted a market analysis to evaluate options for increasing incoming waste flows and minimizing tipping fees. Reviewed current business plan to determine the tipping fee needed for landfill operations to break even under several market scenarios. Prepared an amendment to the current solid waste plan to allow importation of waste from other counties. Conducting public meetings to present the plan amendment.

- *Kern County, California*
  Assisted in evaluating feasibility of transfer station development under several scenarios in metro Bakersfield area. Developed capital and operating costs, conducted centroid analyses, and assisted in conducting an economic evaluation of transportation costs for the transfer station scenarios compared to existing conditions. Also assisted in evaluating feasibility of developing a Dirty-MRF at an existing rural transfer station. Developed capital and operating costs, assisted in comparing cost of Dirty-MRF to other diversion programs in place, and assisted in identifying other alternatives to increase waste diversion.

- *Los Alamos County, New Mexico*
  Assisted in the preparation of Los Alamos County's solid waste management plan, including review and analysis of historical disposal and recycling data, development of capital and operating costs for various disposal technologies and development of diversion and disposal recommendations. Prepared presentation materials for community meetings. Assisted in the preparation of a permit application to New Mexico Environment Department for development of a municipal solid waste transfer station.

- *Ohio EPA*
  Assisted in the preparation of a solid waste management plan update for the Stark-Tuscarawas-Wayne Solid Waste Management District. Reviewed and summarized residential, commercial and industrial waste generation and diversion data. Prepared projections of future waste diversion.

- *Boone County, Iowa*
  Performed an analysis of municipal solid waste composting and construction and demolition debris processing as waste diversion techniques. Also performed an analysis of converting from a source-separated curbside recycling program to a two-stream curbside recycling program. Developed capital and operating cost projections based on extensive research of operating facilities and programs.

- *Lucent Technologies*
  Performed a waste audit of seven Lucent office buildings to characterize waste stream composition in a continuing effort to promote and improve a company recycling program.

- *Will County Land Use*
  Assisted in preparation of economic evaluation and development of financial model for a planned landfill facility.

- *West Cook County Solid Waste Agency*
  Assisted in preparation of benchmark study and evaluation of proposals for the Agency's Regional Disposal Project, a cooperative municipal effort to secure long-term transfer, transport, and disposal capacity. Assisted in preparation of five-year update to solid waste management plan. Performed environmental landfill audit of Tazewell Recycling and Disposal Facility.

- *Groot Industries/Former Alcoa Extrusions Facility*
  Assisted client to review grant programs and other sources of financing for redevelopment project. Assisted in preparation of Illinois Brownfields Redevelopment Loan Program application. Researched and compiled financial and other operating data for proposed recycling facility.

- *Allied Waste Transportation, Inc./City of Chicago Material Recycling and Recovery Facilities (MRRFs)*
  Assisted Allied Waste in preparing a proposal to the City of Chicago to operate the City's three MRRFs. Prepared IEPA and City of Chicago Department of Environment permit applications for all facilities. Prepared operating and safety plans for all facilities. Project manager responsible for preparation of Statement of Qualifications submitted to City of Chicago for long-term lease and operation of the facilities. Participated in multi-department meetings with City of Chicago to negotiate lease/operating terms.

- *Loop Transfer / Laflin*
  Prepared City of Chicago Department of Environment application for permit renewal and modification to incorporate state-of-the-art construction and demolition debris processing system at an existing 2,300 tons per day transfer station.

- *Planet Recovery Systems Transfer Station*
  Prepared IEPA permit application for expansion of the facility and modification in operations. Also prepared and submitted annual applications to the City of Chicago Department of Environment for permit renewal.

- *Midtown Transfer Station*
  Prepared and submitted IEPA permit application for modifications to the existing facility and operations. Also prepared and submitted a short form application to the City of Chicago Department of Environment for permit renewal.

- *64th Street Transfer Station*
  Prepared IEPA permit application for a change in the operations of the facility. Also prepared and submitted annual applications to the City of Chicago Department of Environment for permit renewal.

- *City Waste Transfer Station*
  Prepared and submitted application for permit renewal to the City of Chicago Department of Environment, increasing daily throughput of the facility by 50 percent.

- *Calumet Transfer Station*
  Prepared and submitted application for permit renewal to the City of Chicago Department of Environment, increasing daily throughput of the facility by 50 percent and authorizing 24-hour operation.

- *Shred-All Transfer Station*
  Prepared and submitted application for permit renewal to the City of Chicago Department of Environment.

Professional Affiliations

- Solid Waste Association of North America member
- SWANA, Land of Lincoln Chapter, Past-President (2011-2012), President (2010), Vice President (2016, 2009), Treasurer (2008), Secretary (2015, 2007), At-Large Director (2013-2014, 2005-2006)

Publications and Presentations

- "An Analysis of the U.S. CRT 'Glass Tsunami' Recycling Challenge", Seibert, C., Waste Advantage magazine, December 2014.
- "The Importance of Measuring Waste and Recycling Quantities," Seibert, C., Illinois Recycling and Resource Management Conference, 2012.
- "Recycling Works: A Toolkit for Reducing Waste in the Workplace," Seibert, C. and Allen, M., Illinois Recycling and Solid Waste Management Conference and SWANA Land of Lincoln Chapter Fall Workshop, 2010.
- "Waste Conversion Technology Procurement," Seibert, C., SWANA Land of Lincoln Chapter Fall Workshop, 2009.
- "Turning Waste Into Renewable Energy In Orlando, Florida: A Waste Conversion Technology Procurement Case Study," Oyler, A. and Seibert, C., WASTECON, 2008.
- "Implications of FAA Advisory Guidelines on Transfer Station Development," Seibert, C., Allen, D., and Willis, W., The 22nd International Conference on Solid Waste Technology and Management, 2007.

Michelle M. Spruth

Project Engineer

Professional Qualifications

Ms. Spruth has over 19 years of experience in the solid waste industry within the US and United Kingdom. Ms Spruth has worked as part of a team and managed the development of solid waste facilities projects both in the operational and consulting arena for the private and public sectors. Ms. Spruth managed a team in the implementation of new legislation and associated requirements for the solid waste industry as part of the implementation of the Landfill Directive requirements in Europe and as part of RCRA in the US. In addition to ensuring CCR facilities comply with the requirements of the new CCR Rules, Ms. Spruth has experience in identification of risk, potential impacts on associated operations and solutions in a cost- effective manner. Ms. Spruth is experienced in undertaking and leading stakeholder consultations, liaison with local, regional, state and federal regulators to determine the best-fit solutions as part of facility development. Ms. Spruth undertaken siting, development and permitting requirements for solid waste disposal, treatment and processing requirements for a number of landfills, transfer stations, material recycling and organic processing facilities. Ms. Spruth manages the Coal Combustion Residuals (CCR) Rule implementation for both existing and proposed CCR disposal/treatment facilities for electric utilities.

Professional and Business History

CB&I Environmental & Infrastructure: Project Manager, 2014 to present
SITA (UK): Planning and Project Manager, 2007-2013
Peter Brett Associates Consulting Engineers (UK): Principal Engineer, 2005- 2007
CL Associates Consulting Engineers (UK): Principal Engineer, 2000 -2005
Veolia Environmental Group (UK): Development Manager, 1997-2000
Waste Management (US and UK): Engineer and Project Manager, 1995-1997

Education and Professional Certification

Bachelor of Science in Civil Engineering, (Environmental Engineering) 1995
Texas A&M University, College Station TX, USA

Publications and Presentations

- Packington Anaerobic Digestion Facility, Barriers and Opportunities for Growth in the US – WasteExpo 2014
- Packington Heat and Material Recovery Facility (Anaerobic Digestion and Polytunnels), UK – Various stakeholder presentation for local government from 2010-2012
- Daventry Waste Transfer Station, UK – Various stakeholder presentations from 2009-2010
- Godmanchester Landfill, UK- Various stakeholder presentations from 2008-2009

Key Experience – Other

Solid Waste Facility Permitting

- Project manager for the development and permitting requirements for a 1.6 MW Dry Anaerobic Digestion facility alongside a polytunnel operation to process organic waste and heat recovery at Packington Landfill, Coventry for SITA UK. Ms. Spruth was responsible for all permitting requirements, stakeholder, local authority and regulatory agency consultation and negotiations.
- Project manager for the permitting requirements for ancillary solid waste treatment operations for SITA UK including composting, woodshredding, material recovery facilities and transfer stations. Ms. Spruth undertook and managed the design, permitting, risk assessment, mitigation measures and operational management plans.
- Prepared and project managed permit applications for over 20 landfills and 15 landfill gas facilities including both flares/engines. Ms. Spruth was the Project Manager for permitting across 3 offices works included air, surface water, landfill gas, stability, hydrogeological, amenity issues (vermin, odor, noise), visual, ecological and site phasing for Veolia Environmental Group UK, Waste Recycling Group Ltd. UK and small/ medium solid waste operators.

Landfill Development and Operations

- Project manager for a time extension application at Godmanchester Landfill, Cambridgeshire, for SITA UK. Ms. Spruth was responsible for Environmental Impact Assessments, flood risk and surface water management, landscape, Design and Access Statements and stakeholder/local authority consultation.
- Project manager the permit requirements for Bubbenhall Landfill, Warwickshire vertical extension for Waste Recycling Group UK. Ms. Spruth managed the technical justification for additional height including design and settlement, as well as the Environmental Impact Assessment including ecology, landscape, surface water, amenity and traffic.
- Manager for various minor and major permit modifications for Packington Landfill, Coventry, UK. Ms. Spruth was responsible for various modifications including surface water, landscape and visual impact, bird management, and operational improvement measures around the 385 acre site area. Extensive consultations and complex negotiations with stakeholders, regulatory agencies and local authorities in regards to development of ancillary activities for landfill gas recovery, permanent flare installation and improvement measures for the gas-to-energy facility.
- Project manager for inert landfill extension. Ms. Spruth managed the permitting requirements for the horizontal and time extension for the infilling of inert waste at Holloway Landfill, near Heathrow Airport for SITA UK. Archeological, restoration and surface water management considerations undertaken.
- Project manager for Environmental Impact Assessment works and feasibility associated with the horizontal extension of Cranford Landfill, Cranford, Northamptonshire for SITA UK. Ms. Spruth managed the ecological monitoring and reporting, amenity, phasing, landscape and property issues associated with the extension.
- Project manager for the permit application from the transition from co-disposal to non-hazardous waste infilling, hazardous mono-cell layout, design and phasing for Sutton Courtenay Landfill, Oxfordshire (Waste Recycling Group UK), Cotesbach Landfill (Lafarge Aggregates Ltd UK) and Ling Hall (Veolia Environmental Group UK).

- Project manager for the phasing and construction quality assurance for Cotesbach Landfill (Lafarge Aggregates Ltd UK) Cells 3-6.
- Project manager for the permit requirements for "piggybacking" engineered containment on a non-engineered containment system for Edwin Richards Landfill (Waste Recycling Group UK). Ms. Spruth was responsible for the negotiations with the regulatory agencies and development of the hydrogeological, landfill gas, amenity assessments, surface water and operational management plans for the site.
- Construction Quality Assurance Manager for Cotesbach Landfill, Leicestershire (Lafarge Aggregates) , Ling Hall Landfill, Warwickshire (Veolia Environmental Group) and other landfills operated by small/ mid-sized landfill operators.

Due Diligence

- Project manager for legislative audits for various landfills for Waste Recycling Group UK. Ms. Spruth managed the environmental audits and required improvement measures for the legislative transition for 8 landfills.
- Project Engineer for the environmental due diligence of 25 closed landfills for the acquisition of Leigh Environmental for Veolia Environmental Group UK.
- Project Engineer for the divesture of Waste Management Inc. International Material Recovery Facilities in continental Europe.

Environmental and Civil Projects

- Project Manager for Environmental Impact Assessments (EIA) for the development of solid waste processing facilities for SITA UK. Ms. Spruth undertook and managed the EIA requirements for development of a 50,000 ton per year Dry Anaerobic Digestion, Cranford landfill, Leicestershire horizontal extension, Wimbledon, London Waste Transfer Station re-development, Godmanchester, Cambridgeshire and Sidegate Lane Landfill, Northamptonshire.
- Project Manager for Environmental Impact Assessments for Bubbenhall Landfill, Warwickshire for Waste Recycling Group UK.

Transfer Station Design

- Daventry (Northamptonshire) Transfer Station/ Material Recovery Facility, Ms. Spruth managed the layout and permitting requirements for the development of a MSW and dry recyclable bulking facility for SITA UK.
- Godmanchester (Cambridgeshire) Transfer Station/Material Recovery Facility development, Ms. Spruth managed the permitting and development requirements for the development of a MSW and dry recyclable transfer and bulking facility for SITA UK which included the design/ layout and traffic and vehicle modeling and negotiations with the Highways Agency to ensure safety and compliance with a major central arterial road.
- Project Manager for the Enderby (Leicestershire) Phase 1 Transfer Station/ Material Recovery Facility development. Ms. Spruth managed the transport and ecology assessments inclusive of required surveys for protected species and ecological designations. Extensive stakeholder consultation/ negotiation was required with the local authorities, Forestry Commission and Highways Agency.

- Project Manager for the permit Wimbledon (London) Transfer Station/Material Recovery Facility, Ms. Spruth managed the permitting requirements for a MSW and dry recyclable processing facility. Requirements included the transport, noise, landscape and visual impact assessment.
- Project Manager for the permit modifications for Waterswallows (Buxton) Waste Transfer Station/ Material Recovery Facility/ In-vessel Composting facility for SITA UK. Ms. Spruth managed traffic management plans, architectural modifications, change in waste types, and amenity considerations to enable operation of the facility.
- Project Manager for the Phase 1 and 2 site investigation for the development of an Anaerobic Digestion facility, Waste Transfer Station and Material Recovery Facility in Mitchem, London for SITA UK. Ms. Spruth was responsible for scoping, bidding and managing contractor and reporting of geotechnical data prior to demolition of existing buildings.

Landfill Gas

- Project manager for the permit upgrade from turbines to reciprocating engines for an additional 6.2MW of generating capacity for Packington Landfill. Ms. Spruth responsibilities included managing the additional monitoring requirements for background baseline data including NOx and noise, improving the site layout of engines, air clean-up equipment and flares in addition to landscape and surface water improvement measures. Ms. Spruth managed extensive stakeholder consultation with local and regulatory authorities.
- Engineer for various scoping requirements for a total of 14MW in electrical connections for 20 landfills for Veolia Environmental Group UK, as part of the green tariff uplift for landfill gas generation facilities.
- Landfill Gas Engineer for Green Valley RDF (IL), Metro RDF (WI) and Pheasant Run RDF (WI) Landfills for Waste Management Inc. Ms. Spruth undertook the construction landfill gas extraction for the western area for Metro RDF. Monitoring and field testing for Green Valley RDF. Various permit reporting for Pheasant Run RDF.

Professional Affiliations

Illinois Food Scraps Coalition (IFSC)
Plan Commissioner for the City of St. Charles (2015 to present)
American Society of Civil Engineers
Chartered Institute of Waste Management UK
Illinois Society of Professional Engineers

PROJECT INNOVATIONS INCORPORATED

Charles B. Fleetham, Founder and President, Project Innovations, Inc.

Primary Responsibilities:	Relevant Experience & Expertise:
▪ Lead public engagement strategist. ▪ Participant in Project Work Group planning and meetings. ▪ Design/organize/facilitate two advisory committees: • Residential organics collection • Commercial organics collection ▪ Produce appropriate public engagement materials for advisory committees, Project Work Group, etc. ▪ Develop and maintain project website	▪ Previously facilitated Ann Arbor's Deer Management Program, and Ann Arbor's Sanitary Sewer Wet Weather Evaluation Project. ▪ Plus 20 years' experience facilitating in public arena. ▪ In 2013, concluded three year facilitation of multi-million dollar rate settlement between Detroit Water & Sewerage Dept. (DWSD) and Macomb/Oakland/Wayne Counties. ▪ Published author with more than 28 years of experience in developing and implementing successful public engagement strategies.

As a successful management consultant, author, speaker, and trainer for over twenty years, Charles has a storehouse of expertise in leadership development, organizational change, and strategic planning. He has helped many public sector clients with strategic planning, public involvement, and leadership development including Bloomfield Hills Schools, City of Farmington, City of Kalamazoo, City of Romulus, Detroit Water and Sewerage Department, Michigan Technological University, and Wayne County.

In 2000, he began to integrate the theories of Dr. Carl Jung into his consulting practice because he saw two things: most leadership and organizational development practices were based on worn out traditional thinking and that the most powerful sources of creativity and energy were stored in the unconscious. Based on Jung's ideas and his own experience, he developed the Unrational Leadership™ process to leverage the unconscious for growth and change.

A graduate of Michigan State University, Charles received a BA in English with High Honors. Considered an expert in group dynamics and resolving large-scale organizational conflict, he has broadly implemented the concepts of Unrational Leadership™ in business and government. Although these ideas are counterintuitive to the organizational mind, more and more of his clients are successfully adopting this innovative way of thinking and doing.

Charles is the author of *The Search for Unrational Leadership: Using Rational & Irrational Methods To Change Your Life* –Right Brain Books (2005).

Articles (authored)

- *Irrational Secrets to Innovations* – HR Magazine
- *Michigan at the Crossroads: Five Strategies for Economic Revival* – The Michigan Citizen
- *Michigan's Automotive Leadership A Time for "Lobe"-trotting* – IndustryWeek.com
- *Tapping the Unconscious for Results* - Consulting to Management (C2M)
- *Unleash the Hidden Potential in Your Business* – Business Week
- *Unleash the Innovator Within* – Entrepreneur.com
- *Use Unconscious in Decision Making* – Industry US Business Journal Online

Articles (contributed)

- *Bought, and Waiting for the Ax to Fall* - The New York Times
- *Consultant Holds Key to Business Potential* – Oakland Business Review
- *Merger Therapy: Help employees embrace M & A Change* – Insight
- *Processes Performance Management for Short-term Staff* – Workforce Performance Solutions
- *Southern Strategy* – Crain's Detroit Business
- *Unrational Methods Boost Revenue and Build Leaders* – IOMA

Daniel Gotoff, Partner

Daniel is a former resident of Ann Arbor, who now heads Lake Research Partners' New York office. Since joining the firm in 1996, Daniel has worked for candidates at all levels of the electoral process, including extensive experience in Illinois, as well as on a wide range of issues, including the economy, national security, and government accountability.

Daniel's tenure at LRP has included extensive research for clients, including Presidential, Senatorial, Congressional, Gubernatorial, and Mayoral candidates, as well as the DNC, DCCC and the NAACP National Voter Fund. He has also led the firm's overseas consulting on campaigns in Mexico and the Caribbean. Daniel's analyses of the American political landscape are regularly published and he is a contributor on The Leon Charney Report and other political and public affairs news shows.

In 2009, Daniel was named a Rising Star by Campaigns and Elections magazine. In 2011, Daniel was honored to lead the team that was awarded a Pollie for "Best Use of New Technology in a Candidate, Ballot/Initiative or Public Affairs Campaign" by the American Association of Political Consultants (AAPC).