Maryland Green Registry MEMBER

The Maryland Green Registry promotes and recognizes sustainable practices at organizations of all types and sizes. Members agree to share at least five environmental practices and one measurable result while striving to continually improve their environmental performance.

KCI Technologies Inc.

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Engineering, planning and construction firm
Member since March 2020

Management and Leadership

☑ **Environmental Team**

KCI's Green Committee is composed of 35 members from various departments and offices throughout the United States. The group meets quarterly and represents our diverse set of technical disciplines. The Green Committee's mission is to educate and foster environmentally sustainable practices at KCI, engage our employee-owners, their families, and our stakeholders. We aim to continuously assess and improve internal practices to avoid or diminish unnecessary waste (energy, water, time, and materials). Subcommittees meet more frequently to focus on data and reporting, outreach and awareness, employee programs and operational improvements.

☑ **Environmentally Preferable Products and Services**

Through the years, KCI has teamed with public and private sector clients on projects that meet ever-increasing environmental demands for energy-efficient facilities, clean water, clean energy, adequate sewerage systems, and waste storage and reuse. Our experience includes natural and water resources, water/wastewater, waste-to-energy, and mechanical/electrical planning, engineering, design, and construction services. The firm has extensive experience helping clients implement a range of sustainable solutions, including dam removal for fish passage, solar arrays, and recommissioning by integrating sound resource management practices with state-of-the art technology and innovative construction techniques.

KCI has a Natural Resources Management practice that specializes in stream restoration, wetland mitigation, fish passage, and dam removal assessment, design permitting, biological monitoring and construction services. We also create innovative and unique solutions for complex natural resources projects that require integration of multiple practices and expertise involving ecosystem restoration and engineering, adaptive management, and development of environmental programs. To solve challenging environmental problems, KCI integrates ecologic sustainability with economic integrity. Please find a brief description of some of our projects below:

Willow Bend Stream Restoration: KCI provided the assessment, engineering, design, and permitting services required to construct approximately 1,150 LF of stormwater outfalls and stream channel that drain to the Little Patuxent River watershed in Howard County. The restoration plan included significant floodplain benching and a riffle-pool channel, with steeper riffles and gentler-sloped pools than the existing channel, to provide variability of flow, habitat types, and bed materials. KCI provided on-site construction management, completed an as-built drawing review, and recently completed the monitoring requirement of the multi-year contract.

Southview Road Stream Restoration: KCI developed a comprehensive restoration design for 3,000+ linear feet of stream in Howard County. Work included geomorphic assessments, wetland and forest stand delineations, and biological assessments. Designs incorporated this information along with H&H assessments to recuperate aquatic and riparian habitat; to improve bed and bank stability and develop a bankfull channel; and for avoidance and minimization of impacts to inform planform and grading tie-ins.

Small Watershed Action Plan for Rural Lower Gunpowder Falls: In an effort to meet anticipated NPDES permit requirements for impervious area restoration and Chesapeake Bay TMDL compliance, KCI's water and natural resources team assisted the Baltimore County Department of Environmental Protection and Sustainability in the preparation of management plans. These assessments identified problem areas and potential improvements, and outlined new treatment options and upgrades. Engineers and scientists completed a comprehensive GIS analysis, characterized the watershed, took field measurements and used a variety of models to analyze pollution loading. The rural gunpowder falls watershed included a pilot study to identify sources of temperature pollution within one of the sub-watersheds.

MDOT SHA Chesapeake Bay TMDL GIS Data Management: In response to the comprehensive requirements and standards of the Chesapeake Bay TMDL program and NPDES Phase I Permit, the Maryland Department of Transportation State Highway Administration (MDOT SHA) requested KCI to lead a GIS initiative

to develop primary databases, applications and workflows to support TMDL program management and compliance reporting efforts. For this initiative, KCI is responsible for supporting the Office of Environmental Design's (OED) TMDL program and its efforts to meet the impervious restoration requirements in the NPDES permit, local TMDLs requirements and Bay TMDL pollutant reductions. Work includes IT / GIS data management, stormwater and stream restoration program management, and pollutant load modeling services.

☑ **Environmental Restoration and Community Environmental Projects**

For years, KCI has supported stream clean ups in various U.S. states. In Maryland, KCI has been a sponsor of the MDOT SHA Adopt-a-Highway Program. Our team of committed volunteers is responsible for litter pick up the KCI section of adopted roadway located at York Road (MD 45), between Timonium Road and Padonia Road at least four times a year. KCI is also a proud supporter and Corporate Champion for the Alice Ferguson Foundation (AFF). Through this organization, KCI's team of volunteers and family members performed stream clean ups at the Patapsco Valley State Park, among other activities.

Waste

☑ **Solid Waste Reduction and Reuse**

We strongly encourage our employees to practice waste reduction and recycling in our daily operations. All our marketing material is available in electronic format, and we encourage its electronic distribution. Our company is transitioning from hard-copy printing practices towards a workflow automation processes, aiming for time optimization and paper use reduction. For instance, we started making use of electronic DocuSign forms in some departments, and we hope to spread the adoption of this practice internally, while encouraging our partners, subcontractors and clients to embrace the same.

☑ **Recycling**

KCI's Sparks headquarters is a participant of the Recycling In Maryland With Pride program for paper, bottles and cans. Reporting from our third-party vendors indicated that we have recycled an average of 1,260 pounds of uncontaminated paper per month (around 7.56 tons per year) and shredded and recycled over 3.18 tons in the past year, totaling 10.74 tons of paper recycled annually. According to the Paper Calculator, this would be equivalent to approximately 42.9 tons of wood, 274 million BTUs of energy, 193,000 pounds of CO_2 equivalent, 230,000 gallons of water, and 12,600 pounds of solid waste.

Energy

☑ **Energy Efficiency**

KCI requested the Sparks Headquarters' property owner to replace all 7,165 fluorescent bulbs and/or fixtures throughout the entire building with LEDs. The work was completed in late 2019. We presume savings to be 844,718 kWh annually, with expected costs saving of approximately $88,000/year. In addition, our LEED Gold building has occupancy sensors for automated control of internal lighting and HVAC systems, so the lights and temperature are adjusted accordingly to the specific occupancy of an area in the building.

Transportation

☑ **Efficient Fleet Vehicles**

KCI has installed three dual port Electric Vehicle Charging Stations (totaling six parking spots) at the firm's headquarters in Sparks, MD. The electric infrastructure was designed to easily allow for future expansion of up to 10 parking spots. KCI currently owns two 100% EVs in its fleet and plans to continue to update its carbon engine vehicles to EVs in the future.

Water

☑ **Water Conservation**

KCI's LEED Gold certified headquarters has several water conservation features including bioretention facilities that treat stormwater and motion sensor-operated faucets in bathrooms throughout the building.

Green Building

☑ **LEED Gold**

KCI's headquarters in Sparks is a leased 120,000-square-foot structure that earned the LEED Gold certification for New Construction. Its green features include high-performance climate control, plumbing and electrical systems, white solar reflective roof, and water-efficient landscaping.

Materials selection was critical, with at least 20% purchased from local manufacturers and 50% of the wood-based materials built with products certified by the Forest Stewardship Council. Green-label carpet and low-emitting paints and stains were selected to ensure healthy indoor air quality. Materials used for

cubicles, countertops and other office features contain recycled content. KCI's own engineers and LEED experts contributed to the design.

Environmental Certification Programs, Awards, and Other Activities

☑   *KCI maintains a staff of accredited professionals familiar with USGBC's LEED, EnergyStar and Institute for Sustainable Infrastructure certification systems. Our experience follows the project lifecycle from planning through construction of both facilities and infrastructure. Projects have been completed for government, utility, telecommunications, institutional organizations, industrial, and commercial clients. KCI works with government and industrial clients to resolve contemporary environmental issues, manage health and ecological risk, and help reduce financial liability. We have an extensive team of talented individuals who have earned accreditations as LEED Green Associates, Accredited Professionals, and Envision Sustainability Professionals.*

The [Institute for Sustainable Infrastructure (ISI)](#) is an NGO 501 (c)(3), based in Washington DC, with thousands of members as individual practitioners, government agencies, companies, and other organizations. The ISI developed and maintains a sustainability rating system for sustainable infrastructure projects: Envision, a state-of-the-art holistic sustainability rating system and planning guide that helps professionals plan and execute more sustainable infrastructure projects". The firm has been a proud supporter of ISI from its very beginnings. KCI's Chairman of the Board, Terry Neimeyer, served as a member of the ISI Founding Board of Directors and was the Chairman for two years (2015-2016). KCI's President and CEO, Nate Beil, was the first committee chair of the Envision Awards Committee. KCI has also verified two projects for Envision certification including the multi-billion-dollar San Diego airport renovation.

The following (Maryland based) awards have been presented to KCI in recent years:

- *Community Development Award (2017). Maryland Building Industry Association. Hunt Valley Overlook Residential Development.*
- *Wintergreen Awards for Excellence in Green Building (2017). U.S. Green Building Council (USGBC), Maryland Chapter. Exelon Baltimore Headquarters.*
- *Top Projects (2016). Water & Wastewater Digest. Back River WWTP Enhanced Nutrient Removal. Baltimore City Department of Public Works.*
- *Wintergreen Award (2016). U.S. Green Building Council Chapter. University of Maryland – Wye Oak Building.*

- *Environmental Excellence Award (2015). Maryland Department of Transportation (MDOT). Port of Baltimore Water Quality Master Plan.*
- *Wintergreen Award for Excellence in Green Building (2015). U.S. Green Building Council Maryland Chapter. Dunbar High School Photovoltaic Array.*

Help build a greener, more sustainable Maryland through voluntary practices that reduce environmental impacts and save money.

Learn more at green.maryland.gov