

ENVIRONMENTAL BUSINESS JOURNAL®

Strategic Information for a Changing Industry

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EBJ 2021 Awards & 2022 Executive Review

Environmental Business International Inc.

EBJ BUSINESS ACHIEVEMENT AWARDS RECOGNIZE BUSINESS PERFORMANCE, M&A, PROJECTS, TECHNOLOGY & LEADERSHIP

Environmental Business Journal presents its annual EBJ Business Achievement Awards for outstanding business performance in 2021. Congratulations to the winners, and thanks to our nominating committee and all the companies that submitted nominations. Awards were presented to those who attended Environmental Industry Summit XX at the Coronado Island Marriott Hotel (Coronado, Calif.) on Wednesday, March 16. Environmental Industry Summit XX ran Wednesday through Friday, March 16-18, 2022.

Inside EBJ: Awards & Executive Q&As

EBJ Business Achievement Awards for 2021 recognize and celebrate growth, business performance, new practice areas, M&A, technology development & deployment, project accomplishments and corporate milestones. EBJ Lifetime Achievement Awards recognize career achievements and EBJ inaugurates the EBJ

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EBJ Lifetime Achievement Award recipient profiles from Environmental Industry Summit XX. Heartfelt speeches were shared with the environmental industry community on March 16th & 17th, but in this special EBJ section EBJ Lifetime Achievement Award winners tell EBJ managing editor Lynette Thwaites more of their personal and business stories and life journeys in service of family, community and planet. Each, in their own way, answered the call to environmental action and helped shape the environmental industry we know today. 2021 recipients profiled: Dr. Steven W. Carothers, SWCA Environmental Consultants; Lauren Evans, Pinyon Environmental; Daniel K. Moon, Environmental Business Council of New England; and Jack Bedessem, Trihydro Corporation..... 53-73

SCS ENGINEERS ADVANCES TECHNOLOGY TOOLS IN CORE SOLID WASTE BUSINESS; COMMITTS TO RENEWABLES & CLIMATE MARKET

SCS Engineers is an environmental consulting and contracting firm. SCS core capabilities are in solid and hazardous waste management, renewable energy, remediation, and environmental compliance. SCS has over 1,000 employee-owners who produce technologies and programs that lower operating costs and reduce greenhouse gas emissions for private and public clients. SCS technologies and programs have found footholds in agricultural, industrial, and manufacturing sectors as municipalities and companies that strive to reach their climate change and compliance goals.

***Jim Walsh, President and CEO.** Mr. Walsh is a National Expert on Elevated Temperature Landfills. He has worked at the forefront of sustainable solid waste management, sanitary landfills, and landfill gas (LFG) for more than 40 years. Mr. Walsh regularly serves as a Project Director and Reviewing Principal for SCS landfill and LFG projects. His project experience, coupled with his involvement in professional and industrial associations, has earned Mr. Walsh an international reputation in these specialty fields. He has authored numerous publications and technical support documents and regularly presents at environmental conferences.*

EBJ: Please characterize the elements that contributed to your 37% percent growth in 2021.

Growth has been mostly a function of more emphasis on our climate change and renewable energy practices detailed below, as well as growing our design and project execution services in core capabilities in biogas, solid and hazardous waste management, land remediation and environmental compliance. But here are some factors:

- Federal and State funding for brownfields remediation spurred business, especially our work with public spaces and affordable housing.
- Diversion and recovery with organics programs, including RNG, Ag Gas, and hydrogen projects, are increasing as stakeholders demand proof of carbon reduction claims (we have an entire practice devoted to carbon capture, modeling, reuse, or destruction).
- During COVID, there was no disruption to SCS support- we were able to continue working safely and support our clients who needed extra help during the last 2.5 years. That we could do this and advise them on labor and funding of essential services was of utmost importance to our clients.

One last factor is our in-house technologies help us get better results for clients. Examples are our RNG plants have less downtime and higher quality natural gas. Our brownfields projects require less land left undeveloped during remediation, and our reuse/recovery/organics projects are sustainable and highly regarded for quality. All big economic benefits for our clients. These are all previous EBJ award winners.

SCS doesn't advertise, our business grows with our existing clients, and word-of-mouth drives new clients to SCS. Our Environmental Services for non-landfill or waste clients has grown in the last decade. It took a couple of years to happen since a project can take a year to site-permit-design-build, with another year for operations data to show results. One of the most interesting changes in recent years is our clients' willingness to contract with SCS for full services. Many would give us the site-permit-design portion in the past but contract the build to another firm. Then bring SCS back for CQA, operations, and monitoring. Now, they find it is faster with less risk and cost to have SCS handle it all.

EBJ: What type of climate change and renewable energy services are you providing? When did you start providing these services and what has been the game changer?

Walsh: The factors influencing sales growth are demand for alternative energy, economic incentives such as federal and state incentives, and increased emphasis on enforcement of environmental regulations. The increasing interest in Environment, Social, and Governance (ESG) accountability also has been a factor, as entities seek to reduce carbon footprints and increase sustainability.

We see increases driven by state climate change goals and clean air standards in our core solid waste management competencies, including greenhouse gas management, methane capture and reuse, solar energy, energy storage, emerging agriculture, and organics management. The value we bring is combining what is economically sustainable with various programs based on long-term needs. For example, we helped design the first 100% solar-powered compost facility in California. We design new landfill cells for greater capacity, help clients identify more efficient collection and recycling programs, install and operate landfill gas systems that capture more gas, and build technologies that monitor and control a facility's gas, liquids, and pressures. The ability to offer comprehensive solutions is of benefit to our clients.

SCS Engineers has one of the longest and most successful biogas practices in the United States, primarily in landfill gas to energy, digester gas-to-energy, and renewable natural gas (RNG) in the last decade. SCS Energy®, our practice specializing in waste gas utilization, is one of the county's leading providers of RNG engineer-procure-construct-operate services.

Anaerobic digestion produces gas from organic wastes such as livestock manure and food processing waste. The industry and investors have a growing interest because digester gas can be processed to remove impurities and produce "pipeline-quality" dry natural gas or renewable natural gas (RNG) with low carbon intensity. Our professional staff are well-regarded by their peers and the renewable energy industry for their knowledge and expertise working with energy clients and on progressive Department of Energy programs such as the Sustainable Biofuels Team.

SCS Engineers designs and builds systems that capture, treat, and sequester liquids and leachate that are becoming more expensive to manage. Liquids management preplanning is of interest to our clients in solid waste, food processing, and agricultural industries, among others. Our clients face a constantly-evolving regulatory landscape for wastewater discharges, as new challenges such as PFAS and PCB congeners must be met. SCS offers clients multiple options that they can use to expand their industrial programs as PFAS, wastewater pretreatment, and water regulatory policies change. We provide them the ability to meet future regulations and, if desired, be independent of public infrastructure.

Brownfields and remediation work are increasing with the generous funding available in 2021 and the next few years. We're fortunate that our staff are located in and thus familiar with voluntary cleanup and related programs in many jurisdictions in the United States. These programs facilitate redevelopment in urban areas needing affordable housing and other services.

Interest in sustainable recycling and waste characterization are increasing. Recycled materials are commodities but are only valuable if they are not contaminated. The states and municipalities hiring us are interested in reducing their contamination rates while increasing recycling rates.

EBJ: What are some market trends when it comes to renewable energy? What should we expect for 2022 and 2023?

Walsh: Expect to see many former coal-fired power plant sites be redeveloped for solar and wind energy. These sites have existing interconnection and distribution facilities. Closed landfills and other Brownfields sites also will continue to be developed for solar energy. We will see more energy storage facilities to match alternative energy supply with demand better.

EBJ: In which ways did SCS accelerated the introduction to new technologies to its projects since 2020? How will technology change the way that SCS operates in 2022 and 2023?

SCS Climate Practices

SCS Engineers is experiencing an unprecedented jump in business with more attention on climate change and renewable energy. The firm has steadily grown for decades, celebrating its 51st anniversary with Founder Tom Conrad receiving SWANA's highest honor, the Robert L. Lawrence Distinguished Service Award.

The environmental consulting and contracting firm had a 37% increase in gross revenues by fiscal year-end in December 2021. SCS's core capabilities are solid and hazardous waste management, renewable energy, land remediation, and environmental compliance. SCS retains a large customer base year over year and remains heavily involved in industry associations, research, and education.

The engineers, scientists, and consultants of SCS produce technologies and create sustainable programs that help run industrial operations and essential public services more efficiently while reducing greenhouse gases and environmental impacts.

The firm's technologies and sustainability programs for solid waste management are finding footholds in the agricultural, industrial, and manufacturing sectors. SCS clients entrust the over 1,000 employee-owners with managing millions and millions of metric tons of anthropogenic CO₂e greenhouse gases every year. As environmental engineers, the firm collects and beneficially uses or destroys enough to offset greenhouse gas emissions annually from 14.8 million passenger cars.

Walsh: Managing emissions from landfills generates millions of data points every year. With NESHAP and NSPS regulations, collecting accurate readings and getting them to decision-makers in real-time is critical. MSW landfills have a short 10-day window to identify and correct anomalies. Using SCS DataServices, SCS MobileTools, and SCS RMC make compliance by landfill owners and operators more efficient. They can collect and make sense of the data to operate, demonstrate compliance, make infrastructure investments, and optimize gas capture to use for renewables.

EBJ: How would SCS rely on technology to solve some of the issues experienced due to the tight labor market?

Walsh: Operating modern pollution control equipment at a major landfill or petrochemical plant used to be a highly labor-intensive endeavor. The trend in recent years, and especially during the COVID pandemic, has been to use technologies such as those listed previously to reduce the need for labor. There is less need for data collection by people when technology collects and evaluates the data, and the data are more accurate. SCS sees data collection moving more toward things like unmanned aerial vehicles (drones) and perhaps soon to low-orbit satellites.

EBJ: How is SCS generating new technologies? Do you have internal people who are currently working on this type of projects or do you hire external companies to assist you with the development of new technologies? Or have you acquired companies?

Walsh: We think one of our advantages is that our technology is developed by the people who need it. We prefer to keep the technology development in-house because our systems are highly dependent on what our clients need—we want solutions that integrate well with our engineering and field services. It's a part of our culture that we treat our clients' challenges as if they were our own.

EBJ: Do you foresee anything that would revolutionize the environmental industry in the next 2-3 years?

Walsh: Renewable energy will continue growing with continued federal and state support, especially as energy storage improves. In three years, we may see landfill gas monitoring from satellites, and we're already running comparisons of collecting data by humans, drones, and satellites. PFAS monitoring and filtering out of waste liquids – that's spurring new and interesting technology, and there are

already proven technologies in place that work to remove or dispose of it. Recycling solid wastes into new products is an exciting movement as well.

EBJ: SCS recently expanded its Environmental Due Diligence Practice. Can you describe the type of services that you provide and the highlights of the practice? Why did you decide to expand it and in which ways are you achieving this?

Walsh: Our due diligence practice is based on location, location, and location. Our clients are trying to make a difference by delivering a needed product—they may need to solve environmental challenges along the way, but the goal is to deliver what the market needs in the local area safely. There were major changes underway in the real estate economy even before COVID, and the pace of change is accelerating. Online services need data centers and logistics support, and the demand for safe, affordable housing has never been greater. The large incentive programs and emphasis on Environmental Justice encourages land reuse and cleanup for underserved communities in the past. All of these changes are driving a robust market for due diligence and related services.

EBJ: Can you tell us about the new rules that recently came out in regards to Coal Combustion Residuals (CCR) Management? How is it impacting your clients and what additional services are they getting from you as a result?

Walsh: Old coal-fired power plants are less efficient than modern power plants. As a result, we have seen a historic shift away from the use of coal to make electricity in this country. New effluent guidelines regulations governing wastewater treatment and new regulations governing the management of coal combustion residuals are accelerating the trend. In several jurisdictions, utilities are being directed to excavate coal ash ponds and dispose of the excavated material in lined landfills located miles away. We can assist clients at either end of that journey. Another growth area for us has been groundwater monitoring at CCR sites. We've been in the Subtitle D groundwater monitoring business a long time, and many of the lessons we learned

SCS Engineers' Landfill Drone and Satellite Program for Waste Management and Renewable Energy

SCS Remote Monitoring and Control's (SCS RMC®) drones fly with various cameras and technology and are especially useful for mapping facilities quickly and efficiently. Orthomosaic maps are practical for scientific, compliance, and commercial purposes such as water and liquids management modeling, O&M, troubleshooting, due diligence support, and renewable energy facilities. SCS's program supplements satellite, airplane, and ground-based readings to create comprehensive emissions maps and enables the following:

- Detecting greenhouse gas (GHG) emissions in real-time at landfills or facilities
- Depicting the position and elevation of surfaces, such as facilities, infrastructure, vegetation
- High-quality orthomosaic maps, DTM, and waste volumetrics
- Operational efficiencies, especially over large and hard to navigate areas
- Safer surveying and data collection on dangerous or difficult-to-navigate sites and faster surveys and inspections

SCS provides aerial thermal inspections at solar farms to help maintain optimal solar energy output. Our pilots perform the inspection using a high-resolution thermal camera capturing accurate, non-contact temperature measurements in every pixel. This identifies faulty solar panels, combiner boxes, and other key solar field infrastructure elements. This timesaver pinpoints the exact location with geotags, making staff assignments and diagnostics more efficient.

SCS Remote Monitoring and Control (SCS RMC®) provides remote cloud-based real-time viewing, analysis, alarming, reporting, and control of equipment. They support safer and cleaner operations for industry, energy, and waste management. SCS systems are on over 100 landfills across the country, becoming critical pieces of infrastructure at these sites as reduced operations and maintenance costs with data collected automatically rather than manually. Operators and engineers don't need to travel to the site to operate the equipment; they can do this from anywhere in the world with an internet connection, leading to reduced environmental risk. Alarms, easily accessible data, and automatic reports allow client services to be proactive instead of reactive, so the team can act on a small problem (e.g., pump station high level) and not allow it to turn into a large problem (e.g., overflowing pump station).

in that business are valuable to CCR clients.

It is interesting that one consequence of these changes has been a reduction in the amount of coal combustion residuals being beneficially reused. This is becoming a real problem in some parts of the country, as some of the properties of CCR used for construction are unique.

EBJ: Can you tell us any other factors that differentiate SCS?

Walsh: We talked about the factors that drive sales, but more importantly, we strive to fully understand and embrace our

clients' challenges and goals. This ideal is part of our culture, mission, and intensive professional development and mentorship programs at SCS. We attract high-caliber young and experienced professionals because we are employee-owned (ESOP) and therefore can fund these programs and generously support our industries and communities. As employee-owners, our staff openly communicate and coordinate among the practices resulting in solutions and technology that are sustainable and satisfying to our clients; and rewarding to us as professionals. ■