

## CCBJ 2024 Business Achievement Awards

**C**limate Change Business Journal is proud to announce the winners of the annual CCBJ Business Achievement Awards for outstanding business performance and achievements in the climate change industry.

Congratulations to the 2024 winners and thanks to all companies that submitted nominations. An official awards banquet and ceremony will be held on April 3, 2025 as part of Environmental Industry Summit XXIII at the Coronado Island Marriott Hotel (Coronado, Calif.) from 7-9pm. The Environmental Industry Summit XXIII runs April 2-4, 2025 at the Coronado Island Marriott in San Diego, Calif.

This national two-day executive event is the flagship meeting in EBI's Summit Series and provides ample networking opportunities for environmental industry executives and analysts. EBI's Summit Series offers a opportunity to gain perspective on today's environmental climate change industries from experts, executives and peers. Regional events in Texas, Seattle, Washington DC and Boston are planned for 2025.

*Awards Process: In October-December 2024, CCBJ solicited industry, government, non-profits and the broader climate change community via e-mail, social media, its website, industry events and word-of-mouth for nominations for the 2024 CCBJ Business Achievement Awards. Nominations were accepted in 200-word essays in either specific or unspecified categories. Final awards were determined by a committee of CCBJ staff and contributing editors.*

## Executive Review & CCBJ Awards in 2024

*The annual Climate Change Business Journal Business Achievement Awards recognize innovation, commitment, outstanding performance, project planning, execution or key accomplishments and milestones in 2024. Climate change industry players need resilience as market factors and policy inaction conspire to make business challenging, but leaders and innovators prepare for 2025-2026*

*CCBJ Feature: 2024 data on emissions, energy and temperature combine to frame the continuing challenges of the energy transition & climate resilience; Atmospheric CO2, temperatures, global carbon emissions from fossil fuels and other indicators all reached record highs in 2024* 14-26

*AECOM Responds to Restoration Needs in Puerto Rico With Resources to Advance Nature-Based Solutions* 27

*Solar Incineration Investment Embodies Veolia's Applied Innovation Focus on Operations & Sustainability* 31

*SCS Engineers Continues Strong Growth With Added Focus on Climate Change & Renewable Energy* 35

*EA Engineering Wins Multiple Awards: Climate Vulnerability Assessments, Asset Management and a Climate Projection Assessment Tool Support Infrastructure Protection Across the Client Spectrum* 37

*SWCA Grows 20% in 2024 Paced by Advisory Services, Renewable Energy Engineering & Ecological Restoration, Remaining Flexible to Market Demands* 39

*Weston Solutions Advances Remote Site Assessments, Air Monitoring & Geospatial Data Integration With LiDAR, Uncrewed Aircraft Systems and AI* 42

*CIS Launches Advisory Services That Build Off of Water & Climate Expertise and Expanding Reach Into New Markets* 45

*TRC Invests in the Future with Multiple Innovation Initiatives; Climate Change, Disaster Response & Energy Transition are Key Focus Areas* 48

*Climate X Offers a Strategic Perspective on Recent Rollbacks of SEC Climate Risk Disclosures* 51

*Rincon Consultants Advances Climate Action and Resiliency Planning* 52

*EBJ Lifetime Achievement Award: Bill DiGuseppi, Jacobs* 53-58

## Weston Solutions Advances Remote Site Assessments, Air Monitoring & Geospatial Data Integration With LiDAR, Uncrewed Aircraft Systems and AI

**Weston Solutions Inc.** is an employee-owned firm, founded 67 years ago to solve society's emerging environmental health and safety challenges. Weston began as a leader in the development, design, and construction of water and wastewater infrastructure systems to address demands created by the rapid post-war economic boom and population growth in the 1950s and 1960s. Weston has grown to over 1,000 employees, serving clients across all 50 states, U.S. territories, and around the world. Weston serves clients in the government, industrial, and commercial sectors and have become a leader in the delivery of program management, consulting, planning, engineering, design, construction, and O&M solutions for complex and often time-critical environmental and infrastructure projects.

**Alex Grubb, Project Manager.** Mr. Alex Grubb brings over 22 years of expertise in environmental science, consulting, site assessments investigations and remediation, and project management. He has extensive experience in data needs assessments, collection, interpretation modeling, management and reporting systems with the seamless integration of Geographic Information Systems (GIS).

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*Weston Solutions received CCBJ Awards for Advancing Best Practices in LiDAR Data Collection and Project Management in Wave Monitoring, (See page 43 for award details).*

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**CCBJ: Could you describe how Weston Solutions has utilized LiDAR technology for environmental assessments over the past decade, how the technology has evolved and what key advancements have been most significant?**

Weston: For nearly a decade, Weston has been the industry leader using LiDAR technology for environmental assessments. 3D models generated using aerial-based LiDAR and Photogrammetry have been employed by Weston on a wide range of projects. These technologies allow Weston to monitor changing site conditions over the duration of projects, identify hidden site features and hazards not always evident from initial visual observations, conduct damage inspections at remote locations, generate detailed 3D survey and contour maps, and calculate waste volumes of any surface. The project that stands out to me is the Mt. Diablo Mercury Mine, where we deployed a DJI M350 drone with a LiDAR payload to create a precise 3D model of the 80-acre site. This approach allowed us to see

through dense vegetation and complex topography, revealing features invisible to the naked eye.

One of the most significant advancements I've seen in LiDAR technology has been the ability for users in the field to view data in near real-time. This enables rapid decision making, reducing the number of resources and personnel on-site, and limiting potential exposure to hazardous conditions and physical dangers while collecting geospatial data, which could be seamlessly integrated into ESRI's ArcGIS Online 3D Scene Viewer. The technology offers the ability to visualize the mine's topography, identify previously obscured contamination areas, and calculate potentially impacted soil volumes.

These advancements have greatly improved project efficiency, data accuracy, and safety. For example, at the Mt. Diablo site, LiDAR technology saved us a week of on-ground labor, reduced health and safety risks, and saved an estimated 20% of labor

costs. Additionally, the precise mapping of historical mine workings and structures allowed for more efficient site investigation and significantly reduced project timelines.

CCBJ: What developments do you anticipate in LiDAR technology in the near future, and how do you expect these changes to impact your environmental assessment services and the environmental industry as a whole?

Weston: I anticipate that future developments in LiDAR technology will significantly impact the environmental industry. The integration of machine learning and AI will enhance the efficiency of object detection and predictive modeling, while also reducing the need for manual data processing.

As LiDAR hardware becomes smaller, lighter, and more energy-efficient, its applications will expand. Additionally, the ability to remotely view real-time data will enable quicker and more informed decision-making, improve safety, and reduce the carbon footprint.

**CCBJ: Can you elaborate on the various technologies that are currently being integrated with LiDAR data to enhance environmental assessment accuracy and efficiency?**

Weston: At Weston, we integrate various technologies with LiDAR data to enhance environmental assessment accuracy and efficiency. Our current UAS (Uncrewed Aircraft Systems) applications include conducting initial aerial surveys to assess ground conditions, determine resource needs, locate staging areas and access routes, and identify hazards.

We efficiently characterize and assess damaged areas, such as fire-damaged structures or vegetation, and identify potentially hazardous containers over large areas. We create precise 3D models using LiDAR and photogrammetry to collect spatial data, generate contours, map slopes, and calculate volumes or areas from any surface. Reg-

ularly monitoring changing site conditions, such as flood levels and ongoing removal activities, and performing change-detection analysis helps us estimate the remaining level of effort for field activities.

Using UAS for field measurements, like gamma radiation scanning and air monitoring, significantly reduces the resources needed for site monitoring as the technology advances. UAS surveys limit field personnel's exposure to hazardous conditions, such as chemical, biological, and radiological dangers, and physical risks like unsafe structures and unknown materials. Viewing real-time site conditions allows us to make key response decisions from Incident Command Posts outside the impacted zone. These integrations allow us to enhance the accuracy and efficiency of our environmental assessments, ensuring safer and more effective operations.

**CCBJ: Could you provide examples of other interesting projects where Weston has integrated LiDAR with other technological tools? How did these integrations enhance project outcomes?**

Weston: One notable example is our use of Uncrewed Aerial Systems (UAS) equipped with LiDAR sensors for environmental characterization, surveying, and site mapping. The UAS program allows Weston personnel to capture data quickly and efficiently, even in areas with rough terrain or safety concerns. This data is then integrated into the Weston enterprise data framework, enabling rapid processing and analysis. The integration of LiDAR with UAS technology has facilitated more accurate and comprehensive site characterizations, driving better-informed remediation efforts.

Another example was a project that involved the installation of advanced electrical meters and data acquisition systems across multiple sites. During this project Weston integrated LiDAR technology with field measurement equipment, wireless communication infrastructure, and head-end data management/control equipment.

This integration provided energy managers with the data needed to meet current utilities management, energy management, and energy reduction initiatives. The precise data collection and analysis capabilities of LiDAR technology played a crucial role in the successful implementation of these systems. These integrations have enhanced project outcomes by improving data accuracy, reducing project timelines, and increasing overall efficiency by minimizing the number of days spent in the field. The ability to capture and analyze detailed geospatial data has allowed Weston to deliver superior environmental solutions and demonstrate their commitment to innovation and technological advancement.

**CCBJ: What technology is Weston looking to invest in next to further enhance your environmental practice?**

Weston: We will be investing in emerging technology and resources to advance reality capture—realistic imagery and 3D

scanning data—in the geospatial field, with a focus on building resilience in the face of climate challenges. By leveraging high-resolution LiDAR, photogrammetry, AI-driven processing, and immersive 3D Augmented Reality (AR) and Virtual Reality (VR) solutions, we aim to enhance accuracy, efficiency, and scalability in data collection and analysis. These investments will enable more precise digital twin development, improve decision-making in infrastructure and asset management, address environmental issues, and support rapid response in critical situations. As climate-related risks such as rising sea levels, extreme weather, and natural disasters intensify, real-time, high-fidelity geospatial data—enhanced through AR/VR visualization—will be essential for responding and developing proactive adaptation and mitigation options. By integrating innovative reality capture solutions, we can create more resilient communities and infrastructure better equipped to withstand emerging environmental challenges. ⚙️

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***The integration of LiDAR with UAS technology has facilitated more accurate and comprehensive site characterizations, driving better-informed remediation efforts.***

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### **2024 CCBJ Business Achievement Award for Weston Solutions**

#### **Advancing Best Practices: LiDAR Data Collection**

Weston Solutions leveraged innovative LiDAR technology to revolutionize environmental assessments at the Mt. Diablo Mercury Mine, evaluating the potential impacts of historical mining operations on the community and environment. In April 2024, they employed a DJI M350 drone equipped with a LiDAR payload to create a precise 3D model of the 80-acre area, overcoming challenges posed by dense vegetation and complex topography. Utilizing a near real-time viewer in the field, the team could see through the tree cover and identify features, allowing for the rapid and safe collection of geospatial data, seamlessly integrated into ESRI's ArcGIS Online 3D Scene Viewer. Weston visualized the mine's topography, identified previously obscured areas of potential contamination, and calculated the volume of potentially impacted soil. This method saved a week of boots-on-the-ground labor, reducing health and safety risks such as falling into mineshafts, mercury exposure, or other potential field injuries, and resulted in an estimated \$10,000 labor cost saving. The LiDAR data also facilitated the precise location and mapping of historical mine workings and structures, enabling more efficient site investigation and significantly reducing project timelines.