

CCBJ 2023 Business Achievement Awards

Climate 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 2023 winners and thanks to all companies that submitted nominations. An official awards banquet and ceremony will be held on April 3, 2024, from 7-9pm. at Environmental Business International Inc.'s 22th Annual Environmental Industry Summit.

Environmental Industry Summit XXII runs April 2-4, 2024 at Coronado Island Marriott in San Diego, Calif. This national two-day learning 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 2024.

Awards Process: In October-December 2023, 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 2023 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 for 2023

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| <i>Annual winners of the Climate Change Business Journal Business Achievement Awards for 2023 are listed and profiled to recognize outstanding performance, innovations or accomplishments in 2023. Climate change industry leaders demonstrate innovation and resilience as market factors and policy inaction make business challenging for pioneers that advances climate change solutions and their businesses in 2023</i> | <i>1-10</i> |
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2023 CCBJ Business Achievement Award Winners

Climate Change Business Journal® presents its annual CCBJ Business Achievement Awards for outstanding business performance in 2023. Congratulations to the winners, and thanks to all the companies that submitted nominations.

Disclaimer: Company audits were not conducted to verify information or claims submitted with nominations.

ADVANCING BEST PRACTICES

Climate Change Adaptation & Resilience

TRC for evaluating operational risks related to climate change and developing climate adaptation strategies for The Massachusetts Executive Office of Labor and Workforce Development (LWD). The project aimed to ensure continuation of LWD's services throughout the increased likelihood of severe weather due to climate change. This work was two-pronged, evaluating and reducing priority risks to: (1) LWD facilities and (2) LWD's day-to-day operations. TRC developed groundbreaking methodologies to assess potential risks across all departments and streamlined the engagement process to critical milestones and interviews. TRC assessed and prioritized adaptation strategies that reduce the immediate and consequential risks from both climate change risk assessments. TRC developed a Climate Adaptation Strategy Roadmap and Implementation Tracker that provides detailed strategy worksheets as blueprints for implementation as living documents that can be adjusted in real time to reflect any limitations, barriers or opportunities that arise during the implementation process. Moving forward, LWD is establishing a process that integrates the roadmap into agency activities and monitors progress.

ADVANCING BEST PRACTICES

Climate Change Adaptation & Resilience

EA Engineering, Science, and Technology, Inc., PBC for being at the forefront of developing and implementing nature-based solutions (NbS)—features that mimic the characteristics of natural features but are created by human design, engineering, and construction to increase resilience while also providing economic, environmental, and social benefits. EA maintains cooperative R&D agreements with the National Oceanic and Atmospheric Administration National Ocean Service and U.S. Army Engineer Research and Development Center Environmental Laboratory/Engineering With Nature (EWN) program. These agreements allow EA's team to engage with government researchers focused on coastal and climate resilience. Project work spans all coastal geographies of the United States and supports a wide variety of organizations and communities. EA has worked with non-profit, local, state, and federal partners to assess the impacts of climate change on coastal systems and develop NbS to improve resiliency, including assessing available data, modeling vulnerabilities, and providing solutions for areas of concern. The firm is pioneering innovative applications of natural and nature-based resilience strategies in cold regions, incorporating traditional ecological knowledge through extensive outreach and partnering with indigenous communities.

ADVANCING BEST PRACTICES

Climate Change Adaptation & Resilience

City of Salem, Massachusetts for the Collins Cove to Willows Resilience Study. Due to coastal and precipitation-based storms, portions of this coastal city are currently facing the threat of flooding, which

GZA's Long Wharf Living Shoreline Project in New Haven Includes Planning, Modelling, Data and Partnering with the City, Corps and Community in Coastal Resilience

GZA discusses its role in New Haven's flood management plan, from leading a coastal flood study and urban planning to integrating natural features into shoreline protection.

Founded in 1964 by the late Donald Goldberg and William Zoino, two geotechnical engineers who collaborated while attending the Massachusetts Institute of Technology, **GZA GeoEnvironmental Inc.** (Norwood, Mass.) has grown into a nationally recognized consultancy practicing in the areas of geotechnical, environmental, water, ecology, and construction management. GZA's more than 700 professionals are based across 32 offices in New England, the Mid-Atlantic, and the Great Lakes States. Over the last five decades GZA has completed over 100,000 projects, both nationally and internationally.

Wayne Cobleigh is an Associate Principal, joining GZA in 2001 and specializing in financing and funding of climate resilience and climate adaptation, community outreach and engagement, grant writing, supply chain management, contract administration and resilience standards and practices for natural and nature-based features and waterfront real estate development. In 2013, Mr. Cobleigh initiated a voluntary effort with the Connecticut Department of Energy and Environmental Protection (DEEP) and several other government stakeholders from Connecticut and New York City involving property & casualty insurance, property assessed finance of clean energy and long-term disaster recovery and rebuilding to evaluate methods for financing flood loss reduction measures of existing structures to improve resiliency and affordability of NFIP premiums. In February 2020, he was appointed by the Commissioner of the Connecticut DEEP to the Governor's Council on Climate Change Working Group on Financing Adaptation and Resilience.

GZA received a CCBJ Business Achievement Award for Climate Change Adaptation & Resilience, recognizing GZA for the Long Wharf Living Shoreline Project in New Haven, Conn. See page 4 for award details.

CCBJ: Please describe the history of the Long Wharf Living Shoreline Project and how the concept evolved.

Wayne Cobleigh: The Long Wharf Living Shoreline Project is the seaward component of a staged flood management plan for the Long Wharf District of New Haven, Connecticut. Other components include the existing stone revetment and the proposed structural flood protection barrier by the U.S. Army Corps. of Engineers.

These projects came about as the result of an extensive coastal flood study and urban planning led by GZA with team partners **Utile** and **BioHabitats** for the City of New Haven which included in-depth metocean data analysis, numerical flood modeling, a detailed vulnerability assessment, and

development of alternative shore and flood protection approaches with cost-benefit analyses. As such, a project goal was to integrate natural and nature-based features (i.e., the proposed Living Shoreline) with traditional flood protection structures. Each of the components provides different capabilities but with a goal of working together. The goal of living shorelines, in addition to ecological benefits, is focused more on shoreline protection than flood protection. However, living shorelines, like other natural and nature-based features, are expected to physically change over time in response to the changing environmental conditions including sea level rise. This expectation makes design of these projects very different than the design of structures (e.g., buildings), and it is important that these perfor-

mance expectations and associated risk of future change (including potential for catastrophic loss) of living shorelines are understood by all stakeholders, including the public. Ongoing monitoring and maintenance costs for living shorelines in response to more frequent and severe storms also has the potential to exceed the initial cost of construction, and funding maintenance needs to be planned for by all stakeholders, since federal grants are not currently available for monitoring and maintenance.

CCBJ: Designing coastal resilience to protect land habitat and infrastructure surely involved an array of data models forecasting climate, sea level, storm surges and other factors?

Cobleigh: Yes. As noted above, GZA performed a detailed coastal flood study that included a probability-based analysis of coastal flood factors including wind intensity, flood water levels due to combined storm surge and tides, and waves. Climate change considerations principally included projections for future sea level rise, which will have a significant effect on the frequency and intensity of future flood events. We combined the use of statistical analyses of metocean data with numerical modeling of waves and flooding.

CCBJ: Planning accurate scenarios must require data of sufficient quality and depth. How would you rate data quality, and has it improved over the last decade?

Cobleigh: We are fortunate in the United States to have very good public access to extensive observational, hindcast and forecast coastal data that are developed on a federal and state level including by agencies like NOAA, NASA, FEMA and the U.S. Army Corps of Engineers, as well as academic institutions working in climate science. In Connecticut, we are also fortunate to have CIRCA (the Connecticut Institute for Resilience & Climate Adaptation), which provides policy and technical resources as well as technical data developed by scientists at the University of Connecticut.

One challenge is that different methodologies are currently used by different agencies. For example, in Connecticut, FEMA used different methodologies in establishing the coastal flood hazards (e.g., flood water levels) than the U.S. Army Corps of Engineers used for the North Atlantic Coast Comprehensive Study (NAACS). Both data sources are valid and useful, but it's important to consider the different methodologies when applying the results. Effectively, it adds another source of uncertainty.

Overall, though, data quality is improving rapidly, and the applications of artificial intelligence and machine learning in the industry are expected to result in dramatic (revolutionary) improvements. Increased use and availability of satellite and mid- and high-altitude aerial data are providing significantly improved observational and inferable metocean data (e.g., sea levels).

CCBJ: Did you plan for a peak figure in sea level rise or for storm surges of a certain height or yards?

Cobleigh: Consistent with the natural hazard risk industry, analysis and design is "risk-based." This basically means that coastal hazards (wind, water levels, waves) are characterized in terms of probability of occurrence and that the response of the system (i.e., the Living Shoreline) is also evaluated in terms of probability. This is also the case with considering future sea level rise. Several sea level rise scenarios have been developed based on global modeling.

The different projections represent a wide range of predicted sea level, each with an approximate estimate of probability of occurrence and associated uncertainty. These projections continue to be updated as new global model simulations are performed. For example, at Bridgeport, Connecticut by the year 2080, sea levels are currently predicted to rise between about 1.4 feet and 4.2 feet relative to the year 2000. Lower levels are predicted with an associated high likelihood of occurrence and higher levels with a much lower likelihood.

Specific projections are increasingly being adopted by state agencies for purposes of policy and regulation, which is the case in Connecticut. And like other components of natural hazard risk management, risk tolerance is a consideration in the selection of appropriate sea level rise projections. That is, more critical infrastructure will utilize a more conservative estimate of future sea level rise than less critical structures. Regardless, future sea level rise is, in general, very likely and will have significant impact on flooding magnitude and frequency.

CCBJ: With the Army Corps of Engineers engaged in flood protection alongside GZA's Living Shoreline, was there collaboration to optimize the outcome for both projects?

Cobleigh: GZA initially completed an extensive coastal flood analysis of the Long Wharf area. GZA's methodologies are consistent with the U.S. Army Corps of Engineers', and as such the Corps was able to validate and utilize our information for their feasibility evaluation and design of the proposed flood barrier (which improved efficiency and having a study completed by GZA was a contributing factor in New Haven being selected by the Corps for funding). In addition, the proposed flood barrier was an alternative developed by GZA and the City as part of the initial flood study.

Living shorelines, like other natural and nature-based features, are expected to physically change over time in response to the changing environmental conditions including sea level rise.

So, there was collaboration with the Corps during their feasibility evaluation and concept design. The shoreline restoration and flood management program in Long Wharf takes a multi-stage approach with integrated components including both the Living Shoreline and the flood barrier. One difference is that, like other types of natural and nature-based features (NN-BFs), the proposed Living Shoreline is also intended to provide ecological restoration and habitat benefits, in addition to serving more as a climate adaptation shoreline feature rather than a flood protection measure.

CCBJ: How much public interaction was required to foster community involvement and 'buy in' to the project design?

Cobleigh: Like our other climate resilience planning and design projects, stakeholder engagement input from businesses, environmental advocates and the public who are living, working and visiting within the Long Wharf District was critical to establish consensus and equity in the planning phases. Renderings of the project design concepts helped the public and project partners understand and support funding the project. Food Truck Paradise at Long Wharf is a major dining attraction for locals and I95 travelers to the New Haven Harbor waterfront, and we anticipate the Living Shoreline will become another attraction for visitors to the area.

CCBJ: Is public involvement in these types of coastal resilience projects increasing?

Cobleigh: Public involvement and education have been a key part of resilience planning and design and are likely to increase, in particular where people are repeatedly affected by flooding and extreme

heat as residential and business property owners. This increase in public involvement is particularly likely as people and neighborhoods experience multiple flood events. Another consideration for the public is that resilience projects are currently funded mostly by taxpayers via federal and state grants, so the public has a right to have their say on these projects. We expect that in the future climate adaptation and resilience project financing will be managed by the municipalities, states and neighborhood associations that directly benefit from these projects via climate bonds, public benefit assessments, real estate transaction fees and stormwater utility enterprise funds.

CCBJ: Where did you grow up, and what's the most compelling evidence of climate change that you have witnessed in your lifetime?

Cobleigh: At GZA, many of our climate resiliency planning and design staff involved in coastal resilience projects also participate in coastal recreation activities like boating, surfing, and fishing, because we have grown up on the coast. New Englanders at GZA are used to unpredictable weather, but readily noticeable changes have included a dramatic and experiential rise in sea temperature and more intense rain and winter storms overwhelming our aging stormwater systems. Increased beach erosion and more frequent coastal flooding have also been providing real time impacts, as recently as January 2024, most likely attributable evidence of climate change. ⚙️

Stantec Reflects on Journey to Carbon Neutrality, Tracks Multiple International Reporting Requirements In Pursuit Of Sustainability Goals

Stantec (Edmonton, Canada) is a publicly traded global engineering, architecture, and environmental consulting company with business operating units in Infrastructure, Water, Environmental Services, Buildings, and Energy & Resources. Stantec's multidisciplinary teams address climate change, urbanization, and infrastructure resiliency. In 2021, Stantec was named the fifth most sustainable company in the world and first in North America, by Corporate Knights. The company met its commitment to carbon neutrality by 2022 as a first step in achieving net zero operations by 2030. In 2022, Stantec earned net revenues of \$4.5 billion: 51% in the United States, 26% in Canada, and 23% from Global operations. Stantec has more than 26,000 employees working in over 400 locations across six continents.

Yasmeen Sultana is Senior Principal, Regional Business Leader for The Mountain Region and ESG/Sustainability Technical Leader for Stantec. Leading Stantec's air quality team on the West Coast, Yasmeen is an air quality and greenhouse gas (GHG) expert with experience providing technical support related to emerging air, greenhouse gas, and methane regulations. She helps major upstream and midstream, power, utility, and manufacturing clients comply with U.S. Environmental Protection Agency (EPA) and California AB32 GHG mandatory reporting regulations. Outside of Stantec, Yasmeen also works to advance an improved understanding of air pollution and waste management issues through her position on the Board of Directors of the Air and Waste Management Assn., Mother Lode Chapter.

Stantec was honored with a 2023 CCBJ Business Achievement Award for releasing its 16th annual Sustainability Report in 2023 and delivering on its promise to achieve operational carbon neutrality in 2022. The company was also recognized for Growth in its Low Carbon Energy Practice participating in the Structural Engineers 2050 Commitment Program (SE2050). See pages 4 and 6 for award details.

CCBJ: Congratulations on Stantec's progress towards meeting sustainability goals. Stantec has chosen to follow certain regulatory guidelines, including those of the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), and the Task Force On Climate-related Financial Disclosures (TCFD). When were these integrated into the process?

Yasmeen Sultana: Stantec has followed GRI reporting requirements since our first report for calendar year 2007. Early on, we recognized GRI as a comprehensive ESG framework. When the European non-financial directive reporting requirements came

into place around 2014, GRI was widely recognized as industry standard so we doubled down on our efforts. Stantec has been compliant with the UK's Streamlined Energy and Carbon Reporting requirements (SECR) since 2014. We have been TCFD compliant ever since CDP aligned its disclosures with TCFD in 2017. We are recognized by CDP as a climate leader due to our A-level score. (Stantec has received an A- score for the past 5 years.) In our 2018 report, we began to disclose SASB details.

We are closely monitoring all the changing regulations (new and pending) and are currently preparing against International Sustainability Standards Board (ISSB) rec-