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GROWTH LEVELS IN THE C&E INDUSTRY

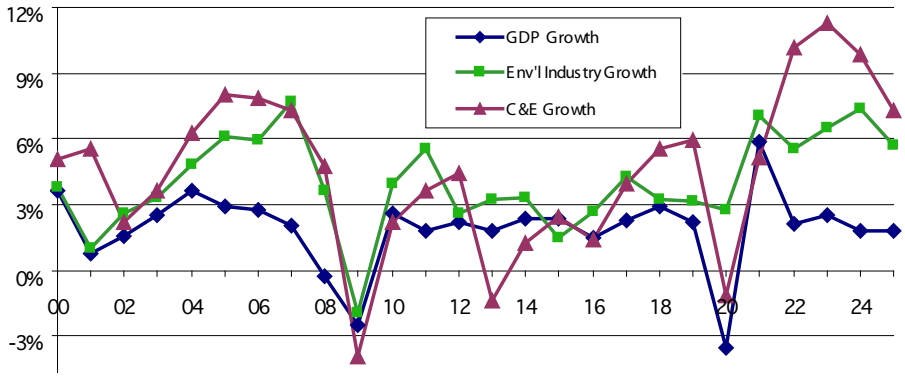
After a historic 2022–23 boom, environmental industry growth in 2025 has downshifted to a more sustainable mid-single-digit pace. Infrastructure and water-driven work remain strong; policy whiplash and higher rates are slowing some clean-energy and green-building segments; PFAS and compliance remain durable but less 'emergency-driven'; and M&A is doing a lot of the work to keep the largest firms' top lines growing faster than the market.

Seen through that lens, 2025 looks less like a turning point and more like a normalization. The industry is still growing, but the broad, synchronized surge of the post-COVID, BIL, IRA period has faded. Instead of across-the-board double-digit gains, most firms are now in a band of modest, steady expansion. The market has effectively rebalanced from an exceptional boom back toward its long-term pattern of mid-single-digit growth—with significant variations by segment and business model.

One of the strongest continuing supports is capital spending on infrastructure. Money authorized under the infrastructure bill is still flowing into water, transportation, grid, resilience and 'mission-critical' projects, and similar programs are in motion in other advanced economies. Utility programs, municipal upgrades, stormwater and flood projects, and large energy-infrastructure investments keep design, permitting, and construction-phase services in demand. For many firms, this work has become the reliable backbone of their portfolio: not spectacular, but persistent, visible, and funded — with AI digital applications constantly in consideration.

At the same time, the policy environment around climate and clean energy has reversed. Some of the flagship tax credits, grants, and loan programs that powered the early IRA wave are being revisited,

Annual Growth in C&E vs the Environmental Industry & GDP



Source: Environmental Business Journal's annual models of the U.S. environmental industry

Inside EBJ: **Environmental Consulting & Engineering 2025**

C&E Growth Cycles: 1994-2026

Looking at the C&E size and growth series from 1994–2026, a pattern of five distinct cycles emerges in environmental consulting & engineering (C&E).

1. Mid-90s a flat maturation period (1994–2000): The industry bumped along in the mid-teens (about $15–17B). Growth was positive but modest in most years (generally 0–5%), with an outright decline in 1996 (-1.9%) and only a couple of mid-single-digit years at the end of the decade. Over the full 1994–2000 span, the market only grew by about 14%. This could be characterized as a maturation phase after the Superfund/Clean Air build-out: work is steady, but competition and client sophistication grew with no real big new driver.

2. Pre-crisis expansion (2001–2007): From 2001 onward, growth runs stronger, peaking at 8.0% in 2005, 7.9% in 2006 and 7.4% in 2007. Revenues climb from $18.4B to $27.1B in six years—a 40% expansion, and a true "up-cycle" where growth is consistently above the already strong GDP, boosted by increasing property values, government spending and oil & gas prices.

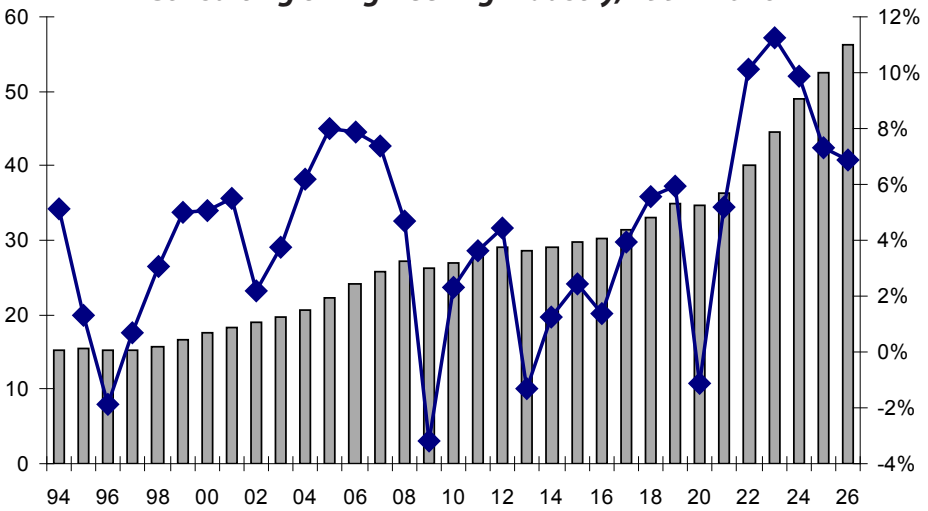
3. Global financial crisis and hangover (2008–2010): The 2008–10 period shows the impact of the financial crisis. 2008 still posts a decent +4.7%, but 2009 drops -3.2%. 2010 recovers to +2.3%, but over the three-year window the market is basically flat to slightly down (revenues in 2010 are just below 2008 in real terms): A classic "step down and slow claw-back" one would expect around a macro shock.

4. Low-gear plateau (2011–2019): The industry settles into a low-to-mid single-digit pattern, with a couple of stronger years (2017–18 at 5.6–5.9%) and two dips (2013 at -1.3% and 2019 at -1.1%). Revenues rise from $27.8B to $34.6B over eight years—or a 26% gain, respectable but not spectacular given the time span. This could be called a "slow grind" era: stable demand, more competition, and no real, single disruptive funding wave.

5. COVID dip and unprecedented boom (2020–2026): The COVID year **2020** shows another brief contraction (**-1.1%**), but what follows is unlike anything in the series. From 2021 on, growth is consistently high: +5.2% in 2021, then 10.1% in 2022, 11.3% in 2023, 9.9% in 2024, and still a very strong 7.3% and 6.9% in the 2025–26 projections. Revenues jump from $34.6B in 2020 to $56.2B by 2026—an increase of 62% in six years, by far steepest growth curve on the chart. Historically, the only vaguely comparable run is 2003–07, but the recent period combines higher growth rates with a much larger base, so the absolute dollar expansion is much bigger.

Putting the cycles in context, a typical "normal" for the C&E industry has been around 4–5% annual growth with he late-90s and 2010s a bit below that and a couple of up-cycles, with growth well above the long-term norm. The recent 2021–24 stretch of double-digit or near-double-digit growth at a $35–50B scale is unprecedented, suggesting that the current boom—driven by infrastructure programs, climate/energy transition, PFAS, resilience, and federal funding—is structurally different (and more powerful) than earlier cycles. So, from this table, you can convincingly argue that the industry has gone through three modest expansions, two clear downturns (GFC and COVID), and is now in the strongest and most extended growth cycle in its modern history. □

Annual Growth in & Size in $Billions of the U.S. Environmental Consulting & Engineering Industry, 1994-2026



Source: Environmental Business International, Inc. Annual research on the environmental industry by EBI and EBJ derived from surveys, interviews and compilations of secondary data.

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ESA DEVELOPS MULTIPLE PLATFORMS FOR DATA COLLECTION AND DATA MANAGEMENT

Environmental Science Associates (ESA) is a 100% employee-owned environmental consulting firm with approximately 750 professionals. Founded in 1969, ESA has grown steadily over more than five decades, expanding its technical depth, markets, and geographic reach while remaining grounded in its mission to partner with clients and communities to shape a sustainable, resilient, and equitable world. Headquartered in California, ESA operates across four regions—Northern California, Southern California, the Pacific Northwest, and the Southeast—and delivers projects nationwide.

ESA provides integrated environmental planning, permitting, design, natural resource management, and technology services to a balanced portfolio of public and private sector clients—from utilities and transportation agencies to renewable energy developers and city governments. As a tech-enabled consultancy, ESA is leveraging emerging technologies—including AI-assisted analytics, GPT services, data visualization, and digital field tools—to enhance environmental decision-making, streamline permitting, and deliver more effective and efficient data-driven solutions.

Mike Leech, Technology Services Practice Leader. Mr. Leech has more than 20 years of experience in technical project management, database development, and training for tribal governments, universities, and private consulting firms. He leads ESA's integration of geospatial and technology solutions to support environmental planning and design. Mike's expertise in emerging technologies helps clients nationwide gain real-time analytics, data visualization, and information management tools that enhance decision-making and project outcomes.

Keith Steele, Firmwide Technology Director. Mr. Steele brings more than 30 years of experience in a wide variety of technology implementations, specializing in architecture, software engineering, database administration, networking, cybersecurity, and cloud infrastructures. As CTO and co-founder of Sitka Technology Group (acquired by ESA in 2022) Keith leads ESA's strategic technology vision and roadmap, R&D, and innovation efforts, aligning ESA's technology strategy and implementation efforts with emerging market opportunities and industry trends. He also oversees the Managed Services group and ESA's federally mandated Information Security program.

ESA Launches Beacon to Modernize Environmental Compliance

ESA has launched Beacon, a new software platform designed to modernize how environmental compliance is managed throughout a project's lifecycle. The tool centralizes data, streamlines workflows, and provides real-time insights, enabling clients and project teams to make proactive, informed decisions. The platform replaces outdated tools like spreadsheets by offering a secure, scalable solution capable of simplifying environmental compliance management. Beacon includes advanced features such as a Compliance Tracker, Monitoring Dashboard, Geospatial Library, and Automated Reporting, allowing users to track mitigation measures, deadlines, and documentation in one centralized, auditable system.

As an environmental firm, we recognize the environmental impact of AI—particularly the fossil fuel energy used to power data centers and the freshwater required for cooling—is an adoption concern.

EBJ: How has the integration of AI changed the way ESA approaches data collection in the field?

ESA: We've recently adopted AI-powered tools such as Fulcrum's Audio FastFill feature, which allows field staff to dictate observations verbally and have those recordings automatically transcribed and translated into completed digital field forms. This innovation significantly reduces manual data entry effort, increases accuracy, and enables our teams to focus more on environmental observations and analysis rather than administrative tasks. In parallel, we are building an enterprise cloud data intelligence infrastructure based on the Databricks platform, which will serve as a unified streaming platform for all field-collected data. This powerful and scalable data lake environment enables more advanced data analytics, machine learning, and Generative AI applications to be developed, deployed, and managed under a single governance structure and infrastructure stack.

EBJ: What measurable improvements have you experienced in project delivery time, cost efficiency, or accuracy of data collected and reported as a result of AI integration? Could you share some examples?

ESA: While we have not yet quantified measurable improvements in terms of cost savings yet, anecdotal feedback from our data collection specialists supports the conclusion that integration of AI tools is helping to streamline ESA's data collection and reporting workflows. Features like AI-powered voice-to-text data entry have significantly reduced the time required for field staff to complete and submit forms, improving overall project delivery efficiency. These tools also enhance consistency and reduce transcription errors, allowing teams to focus on analysis and interpretation rather than manual data entry. However, we maintain a strong "human-in-the-loop" methodology; each AI-assisted dataset undergoes quality control (QC) review by our environmental specialists to ensure accuracy and integrity before reporting or analysis workloads begin.

EBJ: How do you evaluate which new tools and technologies to integrate? Is

there a formal innovation funnel or pilot program approach?

ESA: Our innovation program is grounded in the ISO 56000 family of innovation management standards. We use a comprehensive online innovation platform to organize and streamline activities such as scouting and evaluating trends, tracking emerging technologies, facilitating ideation within our firm, and managing our innovation project portfolio.

We have also established a governance structure to oversee the program and provide strategic direction. This structure includes executive leadership and senior representatives from our various technical practices areas.

For implementation, we employ a range of techniques to validate ideas before broad rollout, depending on the technologies involved and associated risks. When a technology or its implications are not well understood, we typically conduct small R&D efforts and/or develop a proof of concept or minimum viable product to inform decision-making and reduce risk in future project phases. Conversely, when the path forward is clear and risk is minimal, we fast-track the initiative as a standard software development project within our Technology Services Practice.

EBJ: How did you train staff across disciplines to engage with AI-powered tools, and what resistance or learning curves have you encountered?

ESA: One of our first experiments with AI was a pilot rollout of Copilot for Microsoft 365 to about 100 employees as part of our "Early Adopter" program. While this was not a model we would want to scale across the entire organization, it provided an opportunity to form small, focused cohorts. Each cohort explored a subset of Copilot's capabilities, prepared presentations for the larger group, and led discussions about where the tool performed well and where it struggled or showed limitations that warranted attention.

We designed this initial rollout to serve as a hands-on analysis by real ESA users performing real ESA tasks—rather than relying on generic training materials that might not reflect our actual work. As mentioned earlier, this is not the approach we plan to scale as we expand access, but it offered valuable early insights into AI's core capabilities and spurred thinking about how these tools could be applied across ESA. Based on these learnings, we are now developing AI learning pathways tailored to different roles within the organization and will formalize a firmwide AI skill development program as we enter 2026.

As an environmental firm, we also recognize concerns about the environmental impact of AI—particularly the fossil fuel energy used to power data centers and the freshwater required for cooling—is an adoption concern. Although this remains an early-stage effort, we are working to integrate AI-related energy use into our existing emissions reporting framework and will explore ways to reduce or mitigate these impacts wherever possible.

EBJ: Do you have an internal digital innovation group? What are they responsible for and how do they oversee transitions? How are insights from the field fed back into the tech development cycle?

ESA: The central role of our innovation program is to engage ESA employees in a structured innovation management process. While process and structure are important, we also provide participants with innovation-specific training and ongoing coaching designed to strengthen our collective ability to innovate. These sessions focus on developing skills such as unorthodox questioning, challenging the status quo, risk-taking, personal accountability, resilience, and collaboration, among others. As these capabilities mature, we direct cohorts of trained employees toward addressing specific challenges that ESA faces—whether or not those challenges involve digital technologies.

Our digital innovation group, though small, continues to grow in both size and strategic importance. This team is responsible for shaping ideas, supporting business case development, defining requirements, conducting R&D, building and deploying applications, procuring off-the-shelf solutions, and maintaining those systems in collaboration with our IT department and Technology Services Practice. In accordance with our cybersecurity policy, every supported application must have a designated business owner and subject matter expert whose role is to liaise with the technical team. These individuals help make business decisions, guide the application's vision and direction, and gather user feedback to inform backlog prioritization and integration into future development or support sprints.

EBJ: Beacon seems to be a major leap for ESA. What gaps in environmental compliance workflows were you hoping to address with it, and how is it fundamentally different from other compliance management systems?

ESA: Beacon was developed to close critical gaps in how environmental compliance is managed—particularly the reliance on spreadsheets, scattered documentation, and disconnected workflows that make it difficult to track commitments, monitor field activities, and ensure timely reporting. Traditional compliance management systems often treat environmental requirements as static checklists. Beacon, by contrast, was designed from the ground up to reflect the dynamic, project-based nature of environmental work. It provides a structured, centralized Commitment Library that integrates with spatial data, links related requirements, and connects each compliance action to specific project locations and timelines.

What makes Beacon fundamentally different is its combination of open-source flexibility, GIS integration, and real-time monitoring dashboards. It allows teams to document, plan, track, and report compliance across the full lifecycle of a project—automating workflows, syncing field data from mobile tools like Fulcrum, and generating reports that keep project managers and regulators aligned. The result is a transparent, auditable system of record that improves efficiency, reduces risk, and gives clients a single platform to manage all environmental commitments from planning through construction and operations.

EBJ: Aside from Beacon and AI, what other breakthrough technologies have

you adopted that are having a significant impact on ESA's ability to deliver environmental services?

ESA: Beyond Beacon and AI, one of ESA's most transformative technological innovations is our Groundwater Accounting Platform—a data-driven system developed in partnership with the Environmental Defense Fund, Olsson, and the California Water Data Consortium. The Platform ingests data from diverse sources (e.g., satellites, flow meters, sensor networks) to provide near-real-time water budgets, usage tracking at the parcel level, and integrated modeling of hydrologic scenarios. It also supports water trading modules, allocation planning, and "what-if" scenario exploration via the Groundwater Evaluation Toolbox (GET), enabling agencies and growers to make more adaptive, data-informed groundwater decisions. Because it is open source, the Platform invites customization and collaborative enhancements across jurisdictions.

Deploying this Platform has materially expanded ESA's ability to deliver environmental services with deeper insight. In particular, it allows us to transition from periodic reporting into continuous monitoring and dynamic management. Local groundwater sustainability agencies (GSAs) can now use our platform as their backbone for compliance, adaptive management, and stakeholder engagement—with tools to monitor, model, and trade allocations in a transparent framework. Looking ahead, as we integrate this Platform with our AI and analytics infrastructure, we expect to layer predictive tools and decision-support modules directly on top of the accounting backbone to drive even faster, smarter service delivery. □

Teams document, plan, track, and report compliance... automating workflows, syncing field data and generating reports that keep project managers and regulators aligned.

THERM's CLIMATE FINANCE STRATEGY TARGETS FOOD WASTE & METHANE EMISSIONS

Therm is a carbon project developer that brings climate finance directly to the food supply chain. Therm develops and markets high-integrity carbon credits that reward actions to reduce super pollutants from refrigeration and food waste. Founded in 2021, Therm recently closed a $3.6M Series A to accelerate international expansion, and works on projects in the U.S., Canada, and Europe with recent launches in Mexico and the Caribbean, and partners include regional grocers, cold-chain operators, distributors, farmers, and food processors. Therm has issued more than 2 million Super Pollutant Carbon Credits™ and introduced nearly 60 new participants into the carbon market.

Fritz Troller, CEO. Fritz co-founded Therm after years building energy efficiency solutions for the food industry. Fritz has 25 years of experience in sustainability and energy management, with a focus on decarbonizing the food supply chain. His expertise in supply chains and carbon markets, including both voluntary and compliance mechanisms, drives Therm's scalable solutions to reduce emissions across industries. Previously EVP at Dalkia Energy Solutions, Fritz is skilled at turning sustainability into business opportunities.

EBJ: Over the past five years, what have been the most significant innovations or shifts in how the food industry manages its waste?

Troller: The biggest shift in how the food industry manages waste is that food loss and waste is now treated as a climate problem, not just a charitable or operational issue. That reframing has unlocked private finance and commercial incentives: companies are now including food loss in Scope 3 conversations and seeking measurable reductions rather than one-off donations. Methodological advances (notably new, robust protocols for quantifying avoided methane from diversion) and improved data systems have made these interventions investable.

Practically, we've seen a move from ad-hoc diversion programs to vertically integrated, financed solutions—for example, corporates paying for large-scale diversion infrastructures and insetting approaches that reduce upstream emissions. In short, monetization and better measurement have shifted food waste interventions from philanthropy to financeable climate actions at scale.

EBJ: How have corporate sustainability goals and ESG reporting pressures changed food waste practices across supply chains, from farms to food service?

Troller: Corporate climate accounting and Scope 3 pressure have made food waste an accountable line item. As corporations measure and disclose supply-chain emissions, project sponsors—national retailers, foodservice chains, and manufacturers—have increased their willingness to fund upstream interventions that they can count in their targets. That has two effects: (1) capital flows toward proven diversion and recovery solutions because firms can claim reductions against their emissions, and (2) it expands partnerships with local NGOs, farmers, and processors that have long run operational pilots but lacked funding. Farmers, distributors, and grocers who were solving waste operationally now get paid to scale those solutions. We're not inventing new techniques; we're funding and scaling what practitioners have known works for years.

EBJ: Have you observed a shift in responsibility for food waste, from consumer behavior to upstream production practices? How is this influencing investments or partnerships?

Troller: Yes. While consumer behavior remains important, corporate reporting has shifted more responsibility upstream; retailers and suppliers now recognize they can and must act on the structural drivers of waste. This shift has rerouted investments into improved postharvest handling, cold-chain upgrades, better