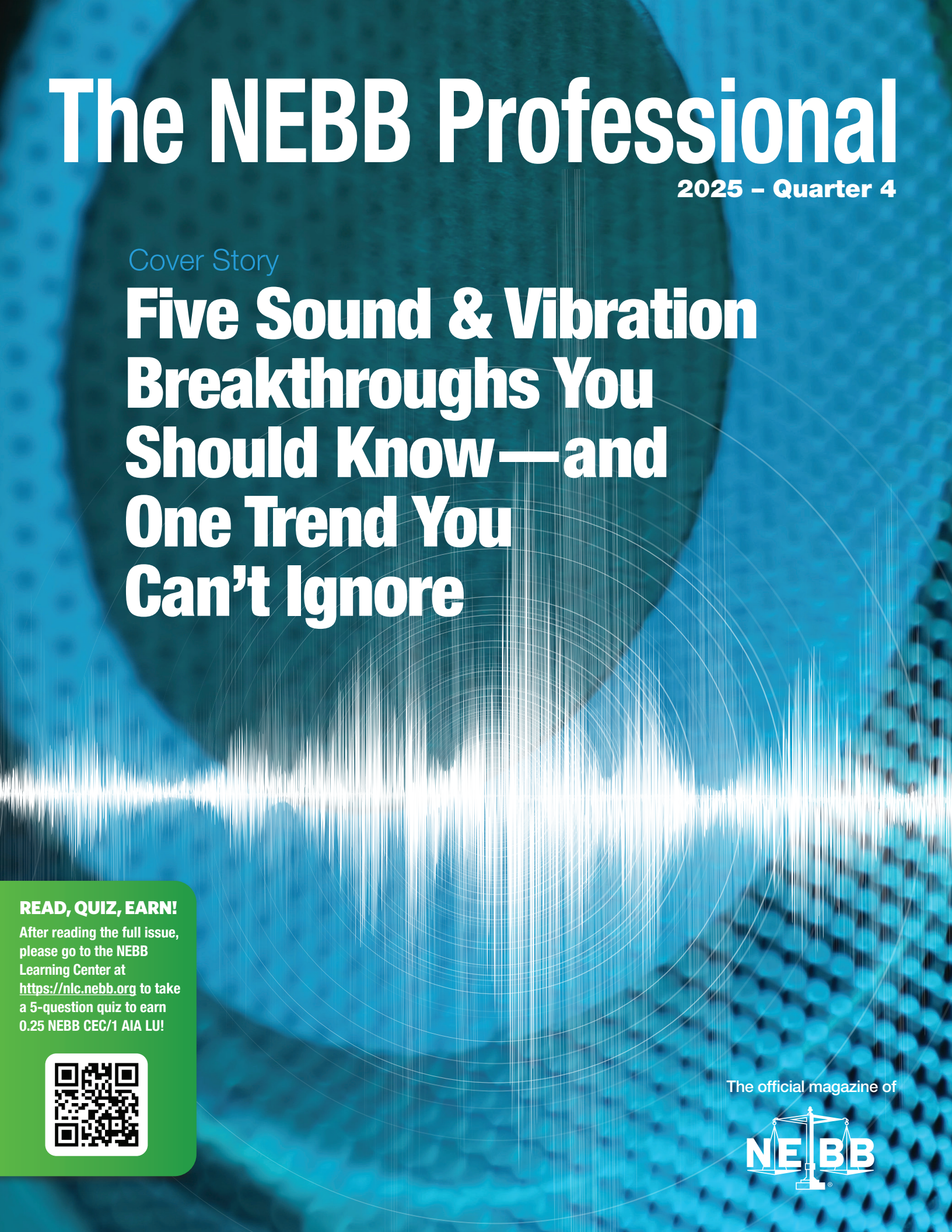
The NEBB Professional

2025 – Quarter 4

Cover Story

Five Sound & Vibration Breakthroughs You Should Know—and One Trend You Can't Ignore



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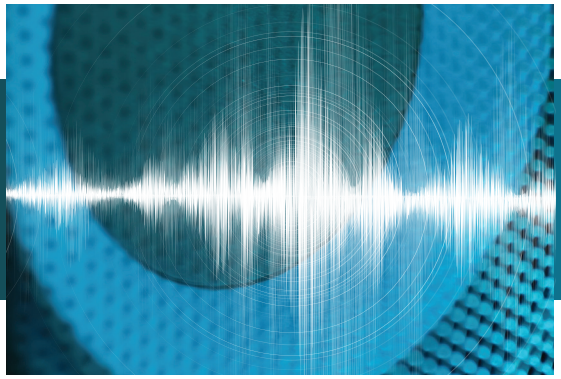

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President's Message

Rodney Hinton

I am honored and humbled to be your 2025-2026 President. I want to thank the current and past NEBB board, as well as my chapter Midsouth Environmental Balancing Bureau, for believing and trusting me to lead this excellent organization. Thanks to Tiffany Meyers and the NEBB staff for keeping us organized and on schedule and helping us build to win. A loving thanks to my wife, Penny, for supporting my dreams and for feeding me during all the online board meetings to keep me from getting "hangry." I am also thankful for the Palmetto Air & Water Balance family for allowing me the time away from the business to serve our NEBB family.

Special thanks to 2024-2025 President Mike Kelly for an excellent conference in Memphis, all your work on the board, and staying on as my wingman. A special thank you also to the presidents that I have had the privilege of learning from while serving on the NEBB board: Jim Wharton, Amber Kelly, Jeff Schools, Jon Sheppard, Phil Emory, and Luis Chinchilla who specifically taught me to "seek first to understand and then to be understood." I also want to thank Don Hill for inviting me to serve this great association.

My theme for this year is "Remaining Resilient During Changing Times." I selected this theme before attending the 2025 conference and believe it is even more relevant after attending the conference and listening to the many concerns (and maybe fears) around artificial intelligence (AI). We will find ways to use AI as a tool, however, we do not believe it is a replacement for human talents.

My experience comes from the replacement of pneumatics with direct digital controls. Manufacturers at the time were stating that an engineer could specify, and pay for, factory calibration of variable air volume (VAV) terminal units. We, the certified field professionals, had to fight an uphill battle because this was not the case–we still had to field calibrate the VAV units, while the contractor believed he should see a cost reduction from us. This is just one example of many things that I have seen seem believable in theory, but do not actually work in the real world. Digital controls have now been around for many years, and we should embrace their abilities, while understanding that we will still need to test, adjust and validate to prove or disprove "garbage in is garbage out."

As everyone is aware, "digital data" is becoming more prevalent every day. Imagine a world where your car will predict when you head to your home or office (mine does this), and can then adjust the setpoint of the thermostat so that it will achieve setpoint when you arrive; lighting controls know when the restrooms are not used and predict when not to run exhaust fans; even programming night, weekend, and holiday setback controls will become a thing of the past, due to artificial intelligence. Let us create the change we want to see by being in the room to not only learn new infor-

mation, but to also teach and give back. The best way to learn is to teach!

I look forward to getting to know as many of you as possible this year and plan to attend many chapter meetings. If we have not met, I encourage you to reach out to me through email or cell phone. Better yet, let's meet in person in Asheville, NC at the 2026 NEBB Annual Conference that will take place October 22-24, 2026. You will notice a honeybee on each side of the 2026 conference logo, as there are honeybee hives on the roof of our host hotel. Certified Professionals are a lot like honeybees–we mainly go unnoticed until we sting. For example, pointing out deficiencies or if don't produce quality (the honey). For a building owner to truly enjoy a beautiful building, all systems must be validated (pollinated) by us, the "bee." As with all things NEBB, we will use "BEE" as an acronym throughout the year:

B - Believe in NEBB Values and Vision
E - Educate to NEBB Standards
E - Empower others to represent the NEBB Mission.

We will work to create a "buzz" around the 2026 conference, as we thrive for this conference to be a homecoming. If you haven't been to a conference lately, or have never attended, please consider it. The fall colors will be stunning and the shared knowledge will not be the same without you.

BEE Resilient!

Rodney

Asheville, NC

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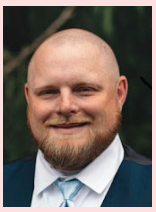

Mark Wasmund Mark Wasmund began his career at TESTCOMM LLC in Spokane Washington in 2013 as a Testing, Adjusting, and Balancing Technician in training. Mark attained NEBB TAB Technician Certification in 2015 and FHT Professional Certification in 2019. Since 2022, Mark has been a Voting Member of the NEBB Fume Hood Performance Testing Committee, becoming Committee Chairman in 2024.

Jim Huber is President of Complete Commissioning, Inc., and is a member of the NEBB Sound and Vibration Committee, as well as the Commissioning Committee. He's been working to make the world a quieter place as a NEBB S&V Certified Professional for nearly three decades.

Don Pittser has been the owner of JEDI Balancing based in Denver since 2000, and has over three decades of Testing, Adjusting, Balancing and Commissioning experience in mechanical HVAC systems. He obtained his NEBB TAB Certified Professional Certification in 1999 and currently serves as the chair of the NEBB TAB Committee.

Ryan Kelly has been in the industry for 11 years as a Project Manager for Air Filtration Management. He is both a NEBB FHT Certified Professional and NEBB CPT Certified Technician, as well as a member of the NEBB Fume Hood Performance Testing Committee.

Jeff Schools is the Past President of NEBB and currently works with the NEBB Headquarters team, NEBB committee chairs, and Compliance members as NEBB Technical Director.

Letter from the Editor

As 2025 comes to a close, I'm reflecting on what we've learned, and where we're heading next. I've had the privilege of working with so many talented NEBB Professionals this past year, and I'm grateful for the dedication of everyone involved behind the scenes, ensuring every issue highlights the insights, innovations, and real-world experiences of the professionals that execute the work day in and day out.

Looking ahead to 2026, my hope for *The NEBB Professional* is to include more voices across NEBB, share more of your knowledge and experiences for the betterment of the whole community, and create more value for our cherished readers. What topics excite you most? What challenges are you solving in the field that others could learn from? Which emerging trends or techniques deserve a closer look?

I invite you to share your ideas, article proposals, and lessons learned so that we may continue to showcase a vast range of industry expertise in a meaningful way. Drop me a line at editor@nebb.org to get the conversation started. Whether it's a breakthrough method, a field-tested best practice, or a topic you wish we'd cover, your contributions will help shape the stories that guide and inspire peers across the industry.

As always, thank you for being an essential part of this community. From the experts whose work fills these pages to the volunteers who help make this magazine possible, my gratitude runs deep. Here's to closing the year with pride in all that we have accomplished together, and stepping into the next one with purpose, momentum, and a shared commitment to excellence.

Kerri Souilliard,
Editor

EVP Update

Strengthening Our Standard:
The Enduring Value of NEBB Certification

By TJ Meyers

As we approach 2026, the pace of change within the built environment continues to accelerate. Smart technologies, interconnected systems, and heightened expectations surrounding performance, energy efficiency, and indoor environmental quality are reshaping the landscape in which we operate. Yet amid this rapid evolution, one constant remains foundational to NEBB's mission and identity: trust.

Trust is the true product of our work. We are not merely in the business of testing systems—we are in the business of validating performance. We do not simply certify individuals—we certify confidence. And for more than five decades, NEBB certification has represented a commitment to quality, accountability, and integrity across the industry. It is not a credential bestowed lightly; it is a standard earned through expertise, discipline, and professionalism.

As we look ahead, it is important to reaffirm what NEBB certification truly signifies. In an industry marked by varying levels of oversight and consistency, the NEBB mark stands apart. It is not a badge; it is a benchmark. Engineers, building owners, and contractors understand that choosing NEBB Certified firms and individuals means choosing assurance—assurance that systems will operate as designed, that test results will be accurate, and that every aspect of the work reflects the highest standards of accountability.

But trust, while powerful, is also delicate. It must be protected and preserved, and that responsibility rests with each of us. Whether you specialize in one discipline or several, your expertise is central to NEBB's reputation and to the value our certification represents. In an increasingly complex and regulated environment, this expertise matters more than ever. Clients do not simply seek skilled professionals—they seek verified practitioners who deliver measurable performance. That is exactly what NEBB Certified individuals provide.

This work extends beyond technical competence. It is grounded in integrity, precision, and professionalism—qualities demonstrated day after day, project after project. This is where trust is built, and where NEBB's value is reinforced.

One of NEBB's greatest strengths is our community. Our network of firms, professionals, technicians, and chapter leaders is far more than an organizational structure—it is a collective movement united by com-

mon standards and a shared purpose. Each firm serves as a standard-bearer. Each certified individual acts as a steward of NEBB's reputation. And through your dedication, mentorship, and commitment to excellence, you help advance our mission.

But no community thrives in isolation. Our continued success depends on staying connected—through training, collaboration, participation in governance, and an unwavering willingness to hold ourselves and one another accountable. We are only as strong as our weakest link, and the future of NEBB depends on the strength of our network.

As we navigate the years ahead, resilience will be essential. Resilience is more than the ability to overcome challenges; it is the discipline to remain aligned with our values, consistently and without compromise. It requires us to uphold the highest ethical standards, represent NEBB proudly, address issues when standards fall short, and mentor the next generation not only through instruction, but through example.

NEBB will never compromise on quality. The trust placed in our certification is the foundation of our credibility, and safeguarding that trust is a collective responsibility. We must continue to demand excellence from ourselves and from one another.

We are not here merely to adapt to change—we are here to shape it. NEBB certification is not an endpoint; it is a platform for leadership, innovation, and progress. As we move forward, let us do so with purpose and clarity. Let us continue elevating our standards and strengthening our profession. Let us remain the gold standard in building performance and environmental quality.

Together, we are not simply certifying systems—we are certifying the future. Our work today sets the trajectory for the built environment of tomorrow.

Thank you for your continued dedication and leadership. ●

Five Sound & Vibration Breakthroughs You Should Know—and One Trend You Can't Ignore

By Jim Huber,
Complete Commissioning, Inc.

NEBB Sound or Vibration Certified Individuals are constantly on the lookout for new technologies that will impact or improve their workflow. The sound and vibration (S&V) industry in 2025 is experiencing its most rapid evolution since the early days of signal analysis. Once defined by large lab equipment, analog signals, and post-processing reports, today's S&V landscape is wireless, smart, connected, and predictive.

As products become quieter, lighter, and more performance-sensitive—from electric vehicles and drones to smart factories and virtual reality—the demand for high-fidelity noise and vibration insight has exploded. Engineers, designers, and data scientists now work hand-in-hand to develop tools that not only measure but also predict, localize, and even "understand" complex mechanical and acoustic behaviors.

This article explores what's *new* in the industry—from AI-driven diagnostics and real-time acoustic imaging to cloud-based testing platforms and next-gen sensors—highlighting where the field is headed and what innovations are already in play.

#1: Smart Sensors Take Center Stage

Perhaps the most transformative development in S&V tech has been the rise of intelligent sensors. Unlike their predecessors, which simply collected raw data for external analysis, today's sensors can pre-process, analyze, and even make decisions at the edge.

What's New?

- Edge AI integration allows sensors to recognize patterns and anomalies without needing to send raw data back to a central server.
- MEMS accelerometers (Micro-Electro-Mechanical Systems) and microphones now offer performance once limited to piezoelectric sensors, with the added benefit of size, cost, and power efficiency.
- Sensor fusion is emerging—combining temperature, humidity, pressure, and vibration data into a single integrated analysis for smarter diagnostics.

For example, in rotating equipment like pumps and fans, embedded AI in wireless vibration sensors can now detect not just that a bearing is degrading—but which mode is failing (lubrication loss vs. misalignment) and how soon it's likely to need replacement. Yes, really!

This shift toward autonomy at the sensor level reduces data overhead and enables large-scale deployments in predictive maintenance programs.

#2: Real-Time Acoustic Imaging — Seeing the Sound

If a picture is worth a thousand words, then a real-time acoustic image might be worth a thousand decibels. The visualization of sound has advanced dramatically with tools like acoustic cameras, holography arrays, and laser Doppler vibrometers (a laser Doppler vibrometer is a scientific instrument that is used to make non-contact vibration measurements of a surface – yes, really!).

What's New:

- AI-powered beamforming allows real-time source separation, even in complex environments (e.g., inside engine bays, HVAC ducts).
- Handheld acoustic cameras now exist with real-time display, enabling quick diagnostics in the field.
- 3D acoustic holography and sound intensity mapping are more precise and faster thanks to GPU acceleration and machine learning denoising algorithms.

These technologies have become especially popular in:

- Automotive NVH troubleshooting
- Leak detection in compressed air systems
- Design optimization for consumer electronics (like eliminating "buzz, squeak, and rattle")

Perhaps the greatest emerging trend right now is the integration of acoustic imaging into augmented reality (AR) headsets—allowing engineers to "see" noise sources overlaid on a product while interacting hands-free.

#3: Cloud-Based Testing Ecosystems

Gone are the days of USB sticks, email attachments, and isolated laptops running FFT software. Today, S&V engineers expect full cloud integration—from data collection to collaborative reporting.

What's New?

- Cloud-native testing platforms (like HBK's HBK Pulse Cloud or Siemens MindSphere) offer full project management, test execution, storage, and visualization.
- Live remote test witnessing lets clients or managers watch a test live, with real-time access to signal traces and annotations.
- Automatic version control, backups, and metadata tagging eliminate common lab errors and improve traceability.

The benefits of this breakthrough includes:

- Better collaboration between global teams
- Easier compliance with quality systems (ISO, FDA, FAA)
- Faster decisions thanks to real-time data dashboards

Cloud platforms are also essential for AI training, allowing massive historical datasets to be mined for trends, predictive models, and benchmarking.

#4: AI and Machine Learning Go Mainstream

Artificial Intelligence is no longer a "coming soon" promise. It's already baked into many S&V tools—and the industry is discovering just how useful machine learning can be.

What's New?

- Anomaly detection algorithms are now standard features in vibration monitoring systems, automatically flagging deviations from known "healthy" signatures.
- Transfer learning allows models trained on one machine type to be adapted quickly to another, even with limited new data.
- Deep learning is now used in source separation—breaking down mixed signals into individual contributors, such as multiple simultaneous impacts in a gearbox.

In acoustic applications, AI is being used for:

- Speech-based product testing
- Sound quality rating models that simulate human perception
- Noise classification in urban planning, defense, and security

If you are worried that all of this technology might cost you your job, don't worry too much yet. While AI opens many doors, experts are still needed to validate results, train models, and ensure that "explainable AI" doesn't become a black box liability. All the more reason to sign up for that NEBB Sound or Vibration seminar that you've been putting off!

#5: Modal and Structural Analysis—Digitally Reinvented

Modal analysis, the backbone of structural vibration testing, is getting a high-tech facelift. Innovations in sensor placement, data acquisition, and simulation integration have improved accuracy, reduced setup time, and enabled correlation with digital twin models.

What's New?

- Automated sensor placement algorithms use CAD geometry to suggest optimal accelerometer locations.
- Hybrid testing combines physical data with finite element models (FEM) to estimate unmeasured points and boundary conditions.
- High-speed camera-based ODS (operational deflection shape) techniques now allow for non-contact measurement of vibrating surfaces with sub-millimeter resolution.

For example, aerospace companies now conduct ground vibration testing using laser vibrometry and hybrid FEM techniques to shorten certification cycles for new aircraft components.

Modal test time has been cut by up to 60% in some programs thanks to digital model correlation and AI-based noise rejection.

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An Emerging Trend: Market Expansion and New Use Cases

The scope of where and how sound and vibration tools are used is rapidly expanding, thanks to affordability, portability, and ease of use.

New and Growing Applications:

- Healthcare Devices: Wearables and diagnostic tools use acoustic emissions and vibration signatures for non-invasive patient monitoring (e.g., detecting arterial blockages or vocal cord function).
- Consumer Electronics: Smart speakers and earbuds undergo rigorous S&V testing to optimize acoustic performance in miniature form factors.
- Green Energy: Wind turbines, hydro pumps, and solar trackers all require vibration monitoring for both safety and efficiency.
- Urban Noise Mapping: Smart cities use distributed microphone arrays and IoT sensors to create live sound maps that support zoning, noise abatement, and enforcement.

Market Trend: Tools once limited to experts in aerospace or defense are now accessible to startups, universities, and small manufacturers. Many companies now offer subscription models for their platforms, further reducing barriers to entry.

The Road Ahead – S&V in 2030 and Beyond

So what's next? Looking ahead to the end of the decade, the sound and vibration industry is poised to become even more integrated, autonomous, and human-centric.

Predicted Developments:

- Voice-driven analysis tools: Engineers may soon instruct software by speaking: "Show me peak amplitude in the 3rd octave band," or "Run modal analysis for the rear bulkhead."
- AI-driven test orchestration: Systems will schedule, run, and interpret tests without human intervention—flagging issues and suggesting design changes autonomously.

- Neuroscience integration: Research into psychoacoustics and neuro-response testing may allow engineers to evaluate not just what is measurable, but what is perceived—bridging the gap between sound quality and human experience.
- Self-diagnosing machines: Equipment will come with built-in S&V tools that detect issues, log events, and automatically request service.

Ultimately, sound and vibration engineering is shifting from reactive troubleshooting to proactive product development and real-time quality assurance. This transformation is empowering engineers, protecting investments, and making the world—quite literally—a better-sounding place.

Turning Noise into Insight

From AI-assisted diagnostics and real-time holography to smart wireless sensors and cloud-native testing platforms, the sound and vibration industry is in the midst of a revolution.

The tools are more accessible, the insights are deeper, and the possibilities are broader than ever. As industries continue to pursue precision, safety, performance, and comfort, the role of acoustics and vibration will only grow louder—ironically, often in service of making things quieter.

Whether you're building rockets, designing headphones, monitoring a wastewater pump station, or troubleshooting pumps or fans, the sound and vibration world of 2025 has something new—and smarter—to offer you.

In just two decades, the sound and vibration industry has gone from a slow-moving, niche discipline to a high-tech enabler of smarter, safer, and quieter designs. The combination of hardware miniaturization, software sophistication, AI, and cloud computing has created an ecosystem where measurement and insight are nearly instantaneous.

As we head into an even more connected and automated future, sound and vibration professionals will play an increasingly important role—not just in responding to problems, but in anticipating them, simulating them, and preventing them altogether. There has never been a better time to become NEBB-Certified in the sound and/or vibration fields! ●

Are You Gambling with Your Fume Hood?

By Mark Wasmund

There is an old saying: *What happens in Vegas, stays in Vegas.* However, when it comes to the chemical fume hood installed in your laboratory, what happens in the hood may not always stay in your hood. Gambling with someone's life, well-being, and health is not a bet anyone should make.

During the course of an average workday, a laboratory worker could be exposed to any number of hazards, yet they may not even know that the life-safety device installed and designed to provide personal protection is not operational or is failing to provide the very protection they rely on. Exposure to chemicals may not show signs or symptoms right away. Short-term and long-term effects are possible and may go unnoticed.

So, who is to blame for this lapse in safety protocol? The lab operator or manager? The college, university, or school? The fume hood user? Each entity using a chemical fume hood should have its own Standard Operating Procedures in place that adhere to the standards set forth in OSHA, NFPA, ANSI, and other applicable guidelines. It is up to them to ensure that these protocols are followed and that their staff are trained not only in proper fume hood usage, but also in general laboratory prudent practices and safety procedures.

When it comes to fume hood testing, there are a lot of misconceptions about how often testing is required, what tests must be performed, and which standards must be adhered to. Then the next question becomes: Who do I roll the dice with to get this testing done?

To understand what proper fume hood testing involves, we need to look at the standards that govern it:

OSHA's Laboratory Standard (29 CFR 1910.1450)

This standard requires that fume hoods be maintained and function properly when used. It mandates that a chemical hygiene plan be in place and that proper PPE be used when handling or working with chemicals. It also provides several recommendations on how a fume hood should be tested and offers general guidelines for performance:

1. **Face Velocity –** Face velocity refers to the speed of air entering a fume hood through the space between the work surface and the bottom of the sash. Fume hoods must have a face velocity between 60 and 110 feet per minute (fpm) to ensure effective containment without creating turbulent airflow. Air inside the lab should flow smoothly and uniformly, without high-velocity drafts or dead zones, to support proper hood performance.
2. **Monitoring –** Every hood should be equipped with a continuous monitoring device—usually a flow gauge or alarm system—to confirm that airflow is within safe limits before use.
3. **Maintenance –** OSHA recommends evaluating hood performance at installation and then testing it at least every three months. Any changes to the lab's ventilation setup should also prompt re-evaluation.

NFPA 45

NFPA 45 requires laboratory fume hoods to be inspected and tested after installation and at least annu-

ally thereafter. Testing includes checking face velocity and evaluating containment—often using smoke or a similar method—to ensure the hood is functioning correctly and safely. Results, including inspection date, face velocity, and fan location, must be documented on a sign affixed to the hood or recorded in a logbook.

6.13 Inspection, Testing, and Maintenance

- **6.13.1** When installed or modified, and at least annually thereafter, laboratory hoods, hood exhaust systems, and laboratory special exhaust systems shall be inspected and tested. The following inspections and tests, as applicable, shall be made:

    1. Visual inspection of the physical condition of the hood interior, sash, and ductwork
    2. Measuring device for hood airflow
    3. Low-airflow and loss-of-airflow alarms at each alarm location
    4. Face velocity
    5. Verification of inward airflow over the entire hood face
    6. Changes in work area conditions that might affect hood performance

- **6.13.2** Deficiencies in hood performance shall be corrected, or one of the following shall apply:

    1. The activity within the hood shall be restricted to the capability of the hood.
    2. The hood shall not be used.

- **6.13.3** The laboratory hood face velocity profile or hood exhaust air quantity shall be checked after any adjustment to the ventilation system balance.

ANSI/ASSP Z9.5-2022: Laboratory Ventilation (7.3.5)

This standard recommends that routine fume hood and other lab environment tests and maintenance tasks precede routine Fume Hood and ECD Tests. Routine performance tests must be conducted whenever a significant change has been made to the operational characteristics of the hood system, in accordance with LVMP Management of Change procedures (Section 3.4).

Fume hood performance shall be tested periodically to confirm operation equivalent to the most recent series of commissioning test results. Routine tests shall be conducted at least annually or as necessary to ensure proper system operation and validate the information reported to BAS and other monitoring or alarm systems.

Preventative maintenance activities should be coordinated with routine tests to improve system performance reliability. At a minimum, routine tests and maintenance activities shall be conducted at the design opening configurations and operating modes corresponding to maximum and minimum flow, and include:

- Survey and inspection of the fume hood
- Measurement of face velocity
- Measurement of cross-draft velocities
- Measurement of VAV response and stability (if applicable)
- Verification of proper operation of occupancy sensors and/or other controls (if applicable)
- Verification of monitor and alarm response
- Airflow visualization tests

Now that we know what to do, we need to find out who can do this testing.

NEBB Certified Professionals are the only certified professionals who are trained, tested, and proven to have the demonstrated ability and acuity to perform these tests. Certification in Fume Hood Testing (FHT) offers hospitals, laboratories, and educational facilities proof of technical knowledge, skills, and instrumentation necessary to test fume hoods for proper ventilation and effectiveness.

Certified professionals can confirm the performance of the fume hood, laboratory, and exhaust system. As more facilities rely on fume hoods in their research laboratories, the demand for certified, competent firms and individuals continues to grow—ensuring that a facility's fume hoods are operating safely and effectively. ●

William Bailey Receives NEBB George B. Hightower Distinguished Service Award

By Jeff Schools

William Bailey was presented with the NEBB George B. Hightower Distinguished Service Award and NEBB Certified Professional Emeritus Status by 2025 NEBB President Mike Kelly at the NEBB National Conference held in Memphis, Tennessee on November 6, 2025.

The George B. Hightower Distinguished Service Award, NEBB's most prestigious honor, was established in 1999. In November of that year, George B. Hightower received the inaugural award at the Annual Meeting in Colorado Springs. Named in his honor, the award recognizes outstanding individuals who have generously given their time and talents, demonstrating their dedication to NEBB and the future of our industry. Mr. Bailey was nominated for the NEBB George B. Hightower Distinguished Service Award by the Tennessee Chapter of NEBB.

A dedicated and active member of both NEBB and the TEBB Chapter since 1997, Mr. Bailey's commitment to our organization over the past two decades has been nothing short of extraordinary. Mr. Bailey has consistently served as a pillar of leadership, contributing his expertise, mentorship, and steady voice of reason whenever it was needed most. He has held every leadership position on the TEBB Board of Directors, always serving with integrity and passion. His contributions extend beyond administrative duties. Mr. Bailey has authored multiple "War Stories" published in *The NEBB Professional* magazine, showcasing both his technical insight and storytelling ability. He also continues to serve as a well-respected corresponding Member on the NEBB TAB Committee.

The George B. Hightower Distinguished Service Award Winners:

- ***1999: George B. Hightower***
- ***2000: David Bevirt***
- ***2000: Bill Abernathy***
- ***2005: Robert B. Gawne***
- ***2008: Jim Bell***
- ***2010: Jim Bochat***
- ***2012: Eric Jenison***
- ***2014: Fred Menger***
- ***2020: Dan Driscoll***
- ***2023: Andy Nolfo***
- ***2025: William Bailey***

Q&A:

Inside the 2026 NEBB TAB Seminar at ASHRAE Headquarters

NEBB's upcoming Testing, Adjusting, and Balancing (TAB) Certified Professional Seminar in February 2026 will be unlike any seminar before. It's the first NEBB event ever hosted at ASHRAE's global headquarters outside of Atlanta, Georgia. The collaboration between NEBB and ASHRAE represents decades of shared history in the building performance industry, and this seminar is expected to draw record attendance.

We sat down with TAB Committee Chair Don Pittser to discuss the history behind this partnership, the inspiration for the event, and what attendees can look forward to.

The NEBB Professional (NP): NEBB and ASHRAE have worked together for many years. Can you tell us a bit about that relationship?

Don Pittser (DP): Yes, NEBB and ASHRAE have had a longstanding connection going back decades, even long before the current memorandum of understanding. In fact, NEBB has been contributing to ASHRAE events for more than 20 years through its golf tournaments, raising funds that benefit ASHRAE research. It's a natural partnership. ASHRAE members, primarily engineers, design the mechanical systems, and NEBB professionals are the boots on the ground testing and balancing those systems. When NEBB was originally founded, many of the engineers involved were ASHRAE members. So, from the very beginning, there's been a symbiotic relationship between the two organizations.

NP: What inspired this particular collaboration for the February 2026 TAB Seminar at ASHRAE Headquarters?

DP: As TAB Committee Chair, it's my responsibility to select the seminar locations each year. Historically, we've hosted them in places that are easy to get to like Roswell, Georgia (at the old IMI training facility), at NEBB TEC, and at the IMI training center in Irving, Texas.

IMI closed their Georgia facility recently, which opened the door for us to explore a new option in the Southeast. Joel Shannon with Research Airflow in Atlanta played a huge role in connecting us directly with the ASHRAE Headquarters. His company actually performed the test and balance work for ASHRAE's headquarters building.

Through Joel's introduction, NEBB and ASHRAE leadership were able to coordinate, and the result is this exciting new collaboration in the form of an ASHRAE endorsed NEBB TAB seminar.

NP: That's a big step. What makes this seminar stand out from previous TAB seminars?

DP: For starters, we anticipate that this event may turn out to be NEBB's largest seminar ever held, as ASHRAE's training room can seat up to 102 attendees. To put that in perspective, that is three to four times what we've been able to accommodate in past seminars, which typically maxed out between 24 to 28 seats.

NP: Who do you expect to attend this seminar, and what will they gain from the experience?

DP: We anticipate a mix of NEBB Certified Professional candidates and design engineers. Engineers typically need 30 to 60 hours of CECs annually, so this seminar offers them a convenient and cost effective way to earn credits while gaining valuable field insight.

It's a win-win. Engineers get real-world exposure to how their designs perform in practice, and NEBB candidates get the opportunity to strengthen relationships with those designing the systems they test. We're expecting strong attendance, and early indicators suggest it could sell out quickly. Attendees will earn a total of 27.5 NEBB CEC hours through this seminar.

NP: Will the seminar's content differ from NEBB's typical curriculum?

DP: The core training and materials will remain the same, but we'll make slight adjustments to ensure it's relevant for both engineers and TAB candidates.
Our other instructors, Josh Whitley and Travis Short, are both professional engineers, as well as NEBB Certified Professionals. Together, we'll be emphasizing the engineering principles behind TAB work to help foster a better understanding between design and field execution.

We joke that engineers live in theory, while TAB folks live in the practical, but this seminar bridges that gap. When both sides understand each other's challenges, projects run smoother, specifications improve, and designs become more realistic and efficient.

NP: How do you see this partnership benefiting the broader industry?

DP: This seminar has the potential to create stronger collaboration between design and field teams. Engineers will gain firsthand knowledge about the limitations and realities of TAB work. For example, understanding that some specification tolerances (like ±5%) are tighter than what even the most advanced TAB equipment can accurately measure at very low flows.

When engineers grasp these nuances, they can design with greater precision and practicality, which ultimately benefits project performance and cost efficiency. Likewise, TAB candidates gain appreciation for the design constraints engineers face. The more everyone understands the "why" behind each part of the process, the better the overall outcome for building owners and occupants.

NP: How else will this experience differ for attendees?

DP: Seminar attendees will get to take part in an exclusive, ASHRAE led tour of the Global Headquarters building where the event is being held. It's a net-zero building with LEED Platinum certification, so it will be very interesting to get to see the building's cutting-edge mechanical systems and sustainability features, firsthand.

NP: What does this event mean for future seminars?

DP: If, or rather when, this seminar is successful, the plan is to make it an annual event at ASHRAE. We'll continue refining the format and materials based on participant feedback.

This collaboration is a meaningful step forward not only for NEBB and ASHRAE, but also for the entire building performance industry. It's about bridging the gap between theoretical design and real-world performance, and that's something everyone can get behind.

This is a milestone event for both NEBB and ASHRAE, as the culmination of decades of partnership and shared purpose. We're looking forward to a strong turnout, new connections, and the kind of collaboration that helps move the entire industry forward.●

WAR STORIES

Fume Hood or Paint Booth?

By Ryan Kelly

During a visit for an annual recertification at an educational institution, I came across something I have never seen before in my 10 plus years of fume hood testing. Most of the fume hood was covered in old newspapers (yes, apparently some people still do buy the newspaper). The reasoning for the newspaper was that the students were spray painting items for part of a project they were doing. While the initial intent of using the newspaper to prevent the spray paint from getting on the fume hood was a good one, the repercussions of the newspaper presented a far greater risk.

With a majority of the back baffles covered, the airflow was significantly reduced and fell well below their institutional specification of greater than or equal to 100 feet per minute (FPM). The only opening that was left uncovered was the bottom-most slot right above the work surface. After completing the airflow velocity test, which revealed the low airflow, airflow visualization testing was performed to show the client the significant impact the newspaper had on their hood.

When emitting the smoke source during the local challenge along the work surface, the smoke was drawn back with no refluxing and properly exhausted. However, when placing the smoke source in the cavity above the work surface, there was no noticeable roll, and the smoke slowly dropped to the work surface before finally being exhausted out the back of the hood. This was only made more obvious during the large-volume challenge test. With the increased amount of smoke, the hood filled up and was not able to exhaust as fast or as much as the amount of smoke introduced into the hood. This was a good visible representation of what would happen when the user would be spray painting inside the fume hood. The fumes would linger at the top of the hood before slowly dropping and finally being exhausted out of the hood.

While showing this to the instructors and maintenance staff, they understood the repercussions of altering the fume hood while trying to protect it. In order to get the fume hood to work properly and meet their site-specific specifications, changes needed to be made. Simply increasing the fan speed would not work, as the baffles were still covered, and this would not increase the face velocity enough or help with the lingering smoke during the airflow visualization testing. Removing the newspapers would have brought them back to their initial problem of not wanting to paint the inside of

the hood, so we needed to come up with a different solution.

After discussions and analyzing all our needs and issues, we came up with the idea of cutting the newspaper to just slightly smaller than the size of the back baffles. In doing this, we uncovered the uppermost and middle baffle openings to allow for airflow to be exhausted out of the hood properly, while still offering the baffles protection from becoming covered in paint. After the alterations were made, the fume hood was retested and showed significant improvements in airflow, and it now met their requirements. During the airflow visualization testing, the smoke was now exhausted properly out of the hood with no refluxing or lazy smoke that lingered at the top of the hood, and it was being exhausted through all three of the baffle openings, rather than just out of the bottom-most opening.

With the fume hood now operating properly, the hood would offer the user the protection it should, and the hood was protected from the paint that was going to be used inside of it. The moral of this story is that if you are going to make alterations—whether it is to your fume hood, your cleanroom, your building, or any type of equipment—you need to think about what your changes will affect. For every action, there is a reaction, so something as simple as adding newspaper could have a significant impact on your hood. When making changes, you should consult your NEBB Certified Professional to make sure you do not negatively impact your equipment. ●

READ, QUIZ, EARN!

After reading the full issue, please go to the NEBB Learning Center at https://nlc.nebb.org to take a 5-question quiz to earn 0.25 NEBB CEC/1 AIA LU!

The NEBB TOOLBOX

NEBB Practical Exam Sites

By Jeff Schools

The Pacific Northwest (PNEBB) Chapter is the 11th NEBB Chapter to provide a NEBB CP practical exam site. The chapter held its inaugural exam testing October 3-5, 2025 at the Western Washington Sheet Metal JATC in Everett, Washington.

TAB Committee Chairman Don Pittser and I attended as the lead and primary examiners for this first exam. This enabled four PNEBB Certified Professionals–Kami Valentine, David Cunningham, Ron Landberg and Soph Davenberry–to shadow during the testing to become secondary examiners. Secondary examiners must witness a minimum of two air and two hydronic exams, as well as gain approval by the lead examiner. Once approved, new examiners are documented with NEBB HQ and maintained on the NEBB HQ approved examiner list.

Don Pittser with the PNEBB shadow examiners at the inaugural practical exam

In June 2024, the Mid-South Chapter opened its practical exam site at Indoor Solutions, Inc. in Columbus, Georgia. I was able to attend as the lead examiner with Joel Shannon as the primary examiner and Scott Kleback, Ron Green, and Thad Routh shadowing the tests to become secondary examiners.

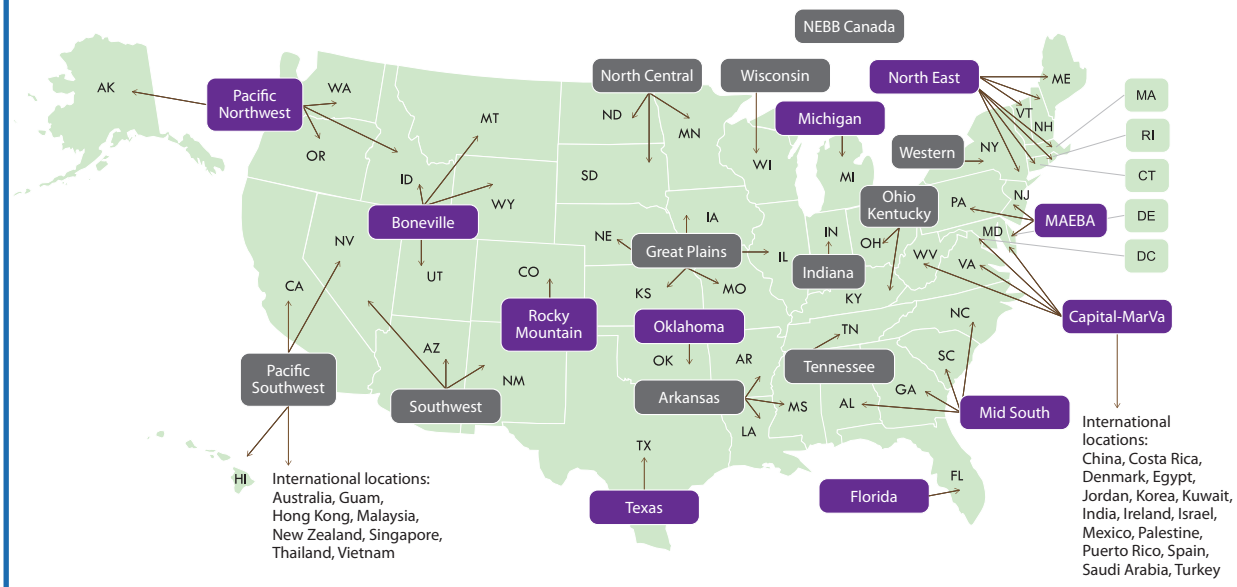
Mid-South Technical Committee Chairman Joel Shannon with the shadow examiners

NEBB has a total of 11 practical exam test sites located across the United States at the following chapters:

- Bonneville Chapter
- Capital MarVa International Chapter
- Florida Chapter (3 test sites)

- Michigan Chapter
- MAEBA Chapter (Mid-Atlantic)
- Mid-South Chapter
- Northeast Chapter
- Oklahoma Chapter
- Pacific Northwest Chapter
- Rocky Mountain Chapter
- Texas Chapter

Chapters offering TAB CP Practical Exams



Purple = TAB CP Practical Exam Sites (as of 10.01.2025)

If you are a candidate in the process of completing your TAB CP certification, you may go to the following link to find contact information for a chapter near you: https://www.nebb.org/about/nebb-chapter-directory/.

Chapter News

Arkansas NEBB

Chapter Coordinator Elizabeth Amador

The Arkansas Chapter will be holding its Recertification Seminar on Friday, September 11, 2026. Please contact Chapter Coordinator Elizabeth Amador at arkansaschapter@nebb.org for more information.

Canada Chapter

Chapter Coordinator Sandrine Verove

Our chapter just onboarded two new young Board members (under 35 years old) in anticipation of "more seasoned" board members considering retirement in the next year. We put the word out during this year's Annual Seminar and it paid off. We have also onboarded a new YPN Liaison who is super excited to fill the position and make their mark.

Our 2026 Annual Seminar will be held in Ottawa in the historic Lord Elgin Hotel on May 22, 2026. We will hold our annual members general assembly the day prior.

We've had five new people interested in getting NEBB Certified. Some have started the process and are taking all the steps under the helm of our TCC.

Historic Lord Elgin Hotel in Ottawa

Florida EBB Chapter

Chapter Coordinator Terry Wichlenski

Florida EBB (FEBB) has announced its 45th Recertification Sessions and Vendor Expo for May 14 - 15, 2026 at the Omni Champions Gate Orlando. NEBB President Rodney Hinton will be providing the NEBB Update and doing a great session, too. It will be our fourth year having a second track for Certified and Non-certified Technicians. Come join us in 2026!

Our NEBB TAB Practical Exam dates are in the works and will be placed on our chapter website, as well

as NEBB's website, shortly. For more information, please contact Florida EBB Chapter Coordinator Terry Wichlenski at 727-240-4254 or febbchapter@nebb.org. Keep in mind, if there are at least two candidates interested in other dates, they can reach out to Terry, as we do try to accommodate the candidates when possible.

Capital-MarVa International NEBB

Chapter Coordinator Barbara Huber


Robert Bigelow

The Capital-MarVa Chapter is pleased to introduce its Young Professional Network liaison, Robert Bigelow. Bobby is a NEBB Certified Professional with over a decade of experience in Testing and Balancing. He currently serves on the chapter's Marketing and Education Committees. We are excited to welcome him into this leadership role!

Great Plains NEBB

Chapter Coordinator Meredith Carr

The Great Plains Chapter started its 2025 recertification seminar with a vendor appreciation social gathering at Fowling Warehouse on Thursday, October 2, offering attendees a relaxed environment to connect with colleagues and build new professional relationships. This networking component underscored the chapter's commitment to fostering community among NEBB Certified Professionals.

The seminar took place on Friday, October 3rd at Marriott Kansas City Overland Park, and featured a series of technical presentations and training sessions designed to keep attendees current with NEBB standards and practices. Topics emphasized the importance of precision in TAB, as well as updates on certification requirements. 6.0 hours of continuing education credits were awarded, ensuring participants remained in compliance with NEBB's rigorous recertification standards.

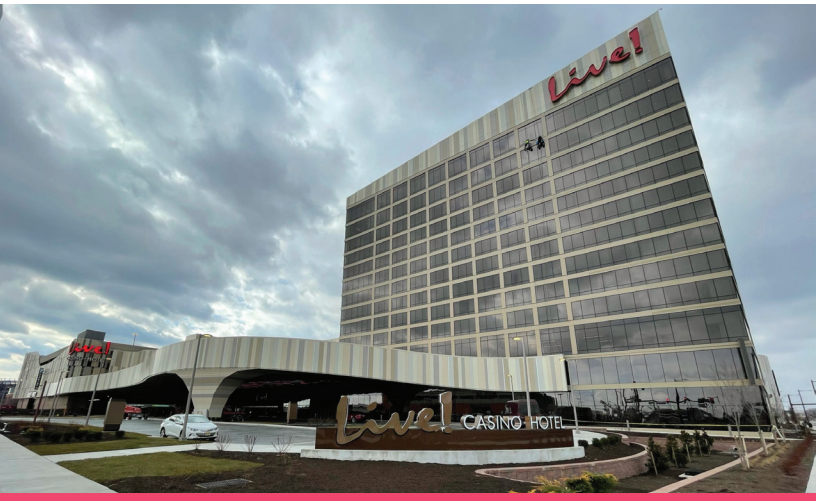
The Great Plains NEBB Annual Recertification Seminar reaffirmed its role as a cornerstone event for the region's building systems professionals. Attendees left with renewed credentials, expanded knowledge, and strengthened connections, ready to continue advancing the high standards of performance that NEBB represents. Next year's event is either going to be in Des Moines, IA or St. Louis, MO. Stay tuned!


Images of the Great Plains Chapter recertification seminar

MAEBA

Chapter Coordinator Trish Casey

MAEBA will be holding its annual Recertification Seminar on September 27 and 28, 2026 at Live Casino and Resort in Philadelphia, PA.



Live Casino and Resort in Philadelphia, PA

MEBB Chapter

The Michigan EBB (MEBB) Chapter held its Annual Recertification Seminar in beautiful Traverse City, MI at the Grand Traverse Resort and Spa on September 26. Tiffany Russell was one of our presenters and spoke about NEBB, among other topics. Always a pleasure to have her as a fellow Michigander with our group! We also welcomed Sam Myers with Retrotec, Phil Cote with Vent-Tech and Russell Taylor with American Data Solutions, Inc.

Images of the MEBB Chapter recertification seminar

Our golf outing was held at the Awesome Wolverine Course on the property of Grand Traverse! A good time was had by all.

Mid-South EBB

Chapter Coordinator Ginger Slaick

NEBB Practical Exam Opportunity – February 24–25, 2026

We are pleased to offer the NEBB Practical Exam on February 24–25, 2026, scheduled directly after the NEBB TAB Seminar. The practical will be conducted at the Midsouth EBB Practical Exam Lab in Columbus, Georgia, providing candidates with a convenient and accessible pathway to complete their certification re-

quirements and advance their professional credentials. To register, go to bit.ly/MidSouthEBB.

2026 Recertification Seminar & Vendo Expo – August 22–23, 2026

We are excited to share that the 2026 Recertification Seminar and Vendor Expo will be hosted at the Sonesta Hilton Head Resort in Hilton Head, SC on August 22 and 23, 2026. This signature event will bring together members, vendors, and industry leaders for two days of professional development, networking, and industry-focused learning in Hilton Head's beautiful coastal setting.

These opportunities reflect our ongoing commitment to supporting members in maintaining certification, expanding expertise, and strengthening connections across the industry.

North Central NEBB

Chapter Coordinator Ashley Lang

North Central NEBB will be hosting its annual recertification seminar on October 8, 2026 at the Doubletree in Roseville, MN. Please contact Chapter Coordinator Ashley Lang at northcentralchapter@nebb.org.

Northeast EBB Chapter

Chapter Coordinator Erika Cross MacDonald

The Northeast Chapter held its annual Recertification Seminar at the Mohegan Sun on October 26, 2025. Many NEBB Certified Professionals and Certified Technicians were present and glad to receive an update from 2025 NEBB President Mike Kelly. The chapter was happy to support the NEBB Annual Conference this year by sponsoring a hole for the annual golf tournament. Additionally, three members of the Northeast Chapter - Olaf Zwicau, Brian Sharkey, and George Martin – were privileged to present at the Annual Conference. Lastly, the Northeast Chapter is looking forward to hosting its annual recertification seminar at the Mohegan Sun in Connecticut this spring!

The hotel at Mohegan Sun in Uncasville, CT


Join us in 2026 at Mohegan Sun for the Northeast EBB Chapter recertification seminar

Pacific Southwest NEBB

Chapter Coordinator James Rosier

The Pacific Southwest NEBB Chapter's Annual Educational seminar is scheduled for May 15, 2026 at the Marriott in Fullerton, CA. We are also working on an app that should be ready in early 2026, which will allow our members in other time zones to watch and receive CECs at a time that works for them.

TEBB Chapter

Chapter Coordinator William Bailey

The TEBB Chapter will be holding its TEBB Chapter recertification seminar in Bartlett, TN for CECs around the first week of April in 2026. Our end of year meeting will be held in December to discuss finances, old and new business, as well as to vote for new Board members and officers. It's hard to believe it's that time already and two years have passed so quickly. We are hoping for possibly one new firm to join in 2026 to place us at seven firms. ●

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For any questions, please contact communications@nebb.org

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2026 NEBB TECHNICAL SEMINAR SCHEDULE

FEBRUARY
Testing, Adjusting, and Balancing (TAB)
February 19 - 22, 2026
ASHRAE HQ, Peachtree, GA

MARCH
Cleanroom Performance Testing (CPT)
March 9 - 11, 2026
NEBB TEC, Gaithersburg, MD

APRIL
Building Enclosure Testing (BET)
April 6 - 8, 2026
NEBB TEC, Gaithersburg, MD

Building Systems Commissioning (CxCT)
April 13 - 15, 2026
NEBB TEC, Gaithersburg, MD

MAY
Fume Hood Performance Testing (FHT)
May 11 - 12, 2026
NEBB TEC, Gaithersburg, MD

Testing, Adjusting, and Balancing (TAB CP)
May 28 - 31,2026
NEBB TEC, Gaithersburg, MD

JUNE
Building Systems Commissioning (CxCP)
June 15 - 17, 2026
NEBB TEC, Gaithersburg, MD

AUGUST
Retro-Commissioning for Buildings (RCx)
August 17 - 20, 2026
NEBB TEC, Gaithersburg, MD

Cleanroom Performance Testing (CPT)
August 24 - 26, 2026
NEBB TEC, Gaithersburg, MD

SEPTEMBER
Testing, Adjusting, and Balancing (TAB)
September 17 - 20, 2026
IMI Training Center, Irving, TX

Sound and Vibration Measurement (SV)
September 21 - 24, 2026
NEBB TEC, Gaithersburg, MD

Building Enclosure Testing (BET)
September 28 - 30, 2026
NEBB TEC, Gaithersburg, MD

OCTOBER
Testing, Adjusting, and Balancing (TAB CT)
Oct 19 - 21,2026
Renaissance, Asheville, NC

If you are interested in attending a seminar, follow these simple steps

1. Go to www.nebb.org click on events and select your seminar.
2. Download the brochure and register through the Certelligence Portal.
3. Questions? Please contact us!