

# SEPTEMBER 2021

INSPECTION NEWS & VIEWS FROM THE AMERICAN SOCIETY OF HOME INSPECTORS, INC



# REGISTRATION OPENS SEPTEMBER 2021

JANUARY 16-19, 2022 ORLANDO, FL THE CARIBE ROYALE



# INSPECTIONWORLD

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# **FEATURES**

MANAGING RISK **Sewer Scope Inspections: An Investment For Your Business** 

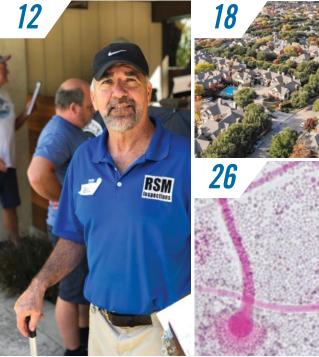
> By Stephanie Jaynes, Marketing Director, InspectorPro Insurance

- 10 Improving Inspections and the Profession By Laura Rote, ASHI Editor
- 14 **New Affiliate Listing and Profiles** By Kate Laurent, ASHI Creative Director
- 18 **Behind the New Radon Mitigation Compliance**

By Dallas Jones, Executive Director of AARST (American Association of Radon Scientists and Technologists)

- *22* **Should Home Inspectors Conduct Environmental Testing?** By Jeffrey C. May
- 30 **ASHI UPDATES** Mark Your Calendars for InspectionWorld! By Marianne Sackett, ASHI Director of Communications
- 32 **Postcards From the Field** It's Wacky Out There









# **ASHI MISSION STATEMENT**

To set and promote standards for property inspections and to provide the educational programs needed to achieve excellence in the profession and to meet the needs of our members.

#### **OFFICERS**

**Bruce Barker**, President Cary, NC, 919-322-4491 bruce@dreamhomeconsultants.com

John Wessling, President-Elect St. Louis, M0, 314-520-1103 john@wesslinginspections.com

**Lisa Alajajian Giroux**, Treasurer Milford, MA, 508-634-2010 homequest1@comcast.net **Bronson Anderson**, Secretary Waynesboro, VA, 540-932-7557 2inspect4u@gmail.com

Mike Wagner,

Immediate Past-President Westfield, IN, 317-867-7688 mwagner@ralis.com

#### **DIRECTORS**

Michael Burroughs 2019-2021 Monroe, LA, 318-376-0482 mike.qedservice@gmail.com

**Rob Cornish** 2019-2021 Ottawa, ON, 613-858-5000 robc@homexam.ca

Steve Cross 2019-2021 Ortonville, MI, 248-342-4205 crossinspectionservices@gmail.com

Mark Goodman 2020-2022 Manchester, MO, 314-409-3991 mark@homeinspectstl.com

**Doug Johnson** 2020-2022 Mobile, AL, 251-295-7254 inspectmobile@gmail.com

Scott Johnson 2020-2022 Marietta, GA, 678-232-6769 whpis@me.com

Publisher: James Thomas Editor: Laura Rote Art Director: Juraj Ilavsky

American Society of Home Inspectors, Inc. 932 Lee Street, Suite 101 Des Plaines, IL 60016 **Jeffrey Leighton** 2021-2023 Scarborough, ME, 207-650-8653 jeffrey.leighton54@gmail.com

**Kyle Rodgers** 2021-2023 Siloam Springs, AR, 479-599-9314 kyle@aplus-inspection.com

Nashaat Roufaiel 2019-2021 Ottawa, ON, 613-355-5777 nr1990@hotmail.com

Vince Tecce 2021-2023 Yardley, PA, 215-527-5710 bioavince@gmail.com

Jim Vaughn 2020-2022 Arlington, VA, 703-675-5452 jim@homeauthority.biz

847-954-3179 Reporter calls only

847-299-2505 (fax) Reporter only Email: jamest@ashi.org

Advertising: Marianne Sackett
Phone: 847-954-3198
Email: communications@ashi.org

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# ASHI STAFF

Main Phone: 847-759-2820, 8:30 am - 5:00 pm Monday - Friday, CST

#### **EXECUTIVE DIRECTOR**

James Thomas, Executive Director 847-954-3182, jamest@ashi.org

### **MEMBERSHIP SERVICES**

**Jen Gallegos**, *Manager of Membership Services & Chapter Relations* 847-954-3185, jeng@ashi.org

**Gaby Nava**, *Membership Supervisor* 847-954-3176, Gabyn@ashi.org

Michael Krauszowski, Membership Services Administrator 847-954-3175, Michaelk@ashi.org

Maria Delgado, Membership Administrator 847-954-3180, mariad@ashi.org

**Melinda Puente**, *Membership Administrator* 847-954-3196, melindap@ashi.org

#### **EDUCATION**

**Edwin Barrera**, *Director of Education and Curriculum Development* 847-954-3188, edwinb@ashi.org

**Bonnie Bruno-Castaneda**, *Education and Event Coordinator* 847-954-3177, bonnieb@ashi.org

**Angela Hall**, *Instructional Designer* 847-954- 3194, angelah@ashi.org

Carrie Maddox, Instructional Designer 847-954- 3191, carriem@ashi.org

Michelle Santiago, The ASHI School Education Manager 847-954-3198, Michelle@theashischool.com

Jazz Schools, Educational Administrator 847-954-3181, Jazzs@ashi.org

### FINANCIAL SERVICES

**Tim Buell**, Financial Services Director and ASHI President 2018 614-746-7485, timb@ashi.org

**Alicia McCray**, Financial Services Administrator 847-954-3184, aliciam@ashi.org

#### **COMMUNICATIONS**

Marianne Sackett, Director of Communications 847-954-3198, Mariannes@ashi.org

**Frank Lesh**, ASHI Ambassador 847-954-3197, frankl@ashi.org

**Rose Buckley**, *Social Media Liaison* roseb@ashi.org

Kate Laurent, Creative Director 847-954-3179, katel@ashi.org

Chris Karczewski, Content Manager 847-954-3183, chrisk@ashi.org

Juraj Ilavsky, Art Director 847-759-2820, georgei@ashi.org



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Note: The Managing Risk column with InspectorPro Insurance provides home inspectors with tips to protect their businesses against insurance claims and examines best practices for crafting effective pre-inspection agreements.

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ome inspectors—may your homeowners and buyers be warned: Having a damaged sewer line can really stink. Unnoticed sewage exposure from broken or blocked lines can expose home dwellers to health hazards like bacterial, fungal, and parasitic infections. Compromised sewage lines can also wreak havoc on homes, causing flooding, sinkholes, mold, and foundation cracks and shifts. Such problems, once manifested, can cost thousands of dollars to mitigate and repair.

Fortunately, there is a way to detect potential problems with a property's sewage line: a sewer scope inspection.



# WHY INSPECTORS OFFER SEWER SCOPE INSPECTIONS

The home inspectors we interviewed perform sewer scope inspections for the following reasons:

# 1. TO MEET DEMAND

Home inspectors like Matthew Hawley of Hawley Home Inspections, LLC in Missouri chose to start performing sewer scope inspections to fulfill clients' requests.

"After we had three buyers ask for a service we don't provide, we figured out how to offer it," Hawley said.

While any client can benefit from a sewer scope inspection, many real estate agents recommend that people purchasing a home more than 20 years old take advantage of the service. As such, you may have more demand for sewer line inspections if there are many older homes in your area.

# 2. TO MAKE MORE MONEY

After 17 years of residential home inspections, Chuck Lambert from Sunrise Inspection Services in California decided to provide sewer scope inspections to promote growth and job security.

"I wanted to make more money, make myself more diversified, make myself more in demand," Lambert said. "Because if the real estate market crashes like it did a couple years back ... and if all you do is home inspections, you're going to be sitting around twiddling your thumbs."

One of the reasons Lambert chose sewer line inspections over other ancillary services is because of how much profit he could make. While the initial investment was higher, Lambert can charge more per inspection than he can for many other additional services. For Lambert, the ability to make his investment money back quickly and then some is a great trade.

"NOT A LOT OF HOME INSPECTORS DO SEWER LINE INSPECTIONS BECAUSE IT'S NOT CHEAP," HE SAID. "MY ATTITUDE IS, IF I CAN SPEND \$7,000 ON A TOOL THAT'S GOING TO MAKE ME \$40,000 IN A YEAR, WHERE DO I SIGN UP?"

# **INVESTMENTS INSPECTORS MAKE**

# **EDUCATION AND LICENSING**

Most states do not require sewer scope inspectors to have a license. But some jurisdictions do. Be sure to check your state and local laws to see if your area requires licensure and what you need to do to obtain licensure.

However, even if training is not required in your state, taking courses to bolster your knowledge of plumbing systems and scope inspections is wise. By pursuing knowledge, you qualify yourself to perform better inspections, generate more credibility in the field, and mitigate potential claims. There are multiple resources available on the ASHI Online Learning Center as well as through third-party training schools.

#### **EQUIPMENT**

You can't perform a sewer scope inspection without a camera system. Most quality systems cost between \$6,000 and \$7,000 and include cables, cameras, and batteries. Some things to consider when selecting a sewer scope inspection camera include:

- PROBE LENGTH
- PROBE MATERIAL
- LIGHTING CAPABILITIES
- IMAGE CAPTURING AND FEATURES
- WEIGHT AND MANEUVERABILITY

Note that some vendors will finance camera systems, making the barrier to entry lower. Talk to sewer scope sellers to see what payment options are available.

### **ENDORSEMENTS**

An endorsement is a form that either modifies or adds coverage to your insurance policy. Most home inspection insurance policies exclude additional services like sewer scope inspections. Thus, the insurance company will not offer coverage for those additional services without an endorsement. So, if you perform sewer scope inspections or want defense and indemnity for related claims, you may wish to change an existing policy exclusion with an endorsement. Typically, insurers charge a flat, annual fee around \$150 for a sewer scope endorsement.



# LIMITING YOUR LIABILITY

Carrying a sewer scope endorsement is one of the most important things you can do to protect against related claims. However, there are additional risk management techniques you can employ to safeguard your business. Below are some suggestions.

## TRAIN YOUR EMPLOYEES.

If you run a multi-inspector firm, it's important that you train not only yourself but your employees to be proficient sewer scope inspectors. It takes skill and practice to use a scope well.

To make sure his employees know what they're doing, Hawley has his inspectors practice scope inspections with him.

# "MY EMPLOYEES DO AROUND 50 SEWER SCOPE INSPECTIONS WITH ME BEFORE DOING ONE ON THEIR OWN,"

HAWLEY SAID.

"THEN I REVIEW MY EMPLOYEES' SEWER SCOPE INSPECTIONS FOR FOUR TO SIX MONTHS AFTER THEY START DOING THEM ON THEIR OWN."

## MAKE SURE YOU HAVE A LONG ENOUGH SCOPE.

Remember how we said scope length is one of the considerations necessary when purchasing a camera system? Having a long enough scope may help prevent claims.

In several recent claims, inspectors' scopes were too short to see the entire sewer line. To avoid falling short, invest in a longer scope or investigate other openings to the sewer line.

If you're unable to inspect the entire sewer line due to the length of your scope and lack of alternative access, let your client know—both verbally and in your report. Also, recommend your client hire a plumber to examine the remaining feet you were unable to inspect.

#### TAKE CARE OF YOUR EQUIPMENT.

After purchasing the appropriate equipment, you have to take care of it. In a recent claim, a home inspector's camera battery failed during a portion of their sewer scope inspection. Rather than backing the scope up and restarting the inspection with a fresh battery, the inspector assumed things were OK in the uncaptured area. It turns out there was a break in the pipe right where the camera had failed. Had the inspector re-scoped, they surely would have spotted the problem.

Avoid unnecessary equipment failure with regular maintenance and checks. If, despite your best efforts, your equipment does break down during your inspection, tell your client. Again, it's smart to communicate to your client verbally and in your report. We also suggest working with your client to reschedule the sewer scope inspection for a later date when your equipment is fully functional.

To learn more about your equipment-related risk, read our article "Am I liable if my home inspection tools fail?" on inspectorproinsurance.com.

## DON'T GO FURTHER THAN YOU SHOULD.

While errors and omissions (E&O) claims are more common, general liability (GL) claims can also occur. If he encounters a blockage, Matthew Steger of WIN Home Inspection in Pennsylvania avoids causing property damage by stopping his examination there.

"If I find an obstruction, I don't go further. If I did, my camera could get stuck or damaged," Steger said.

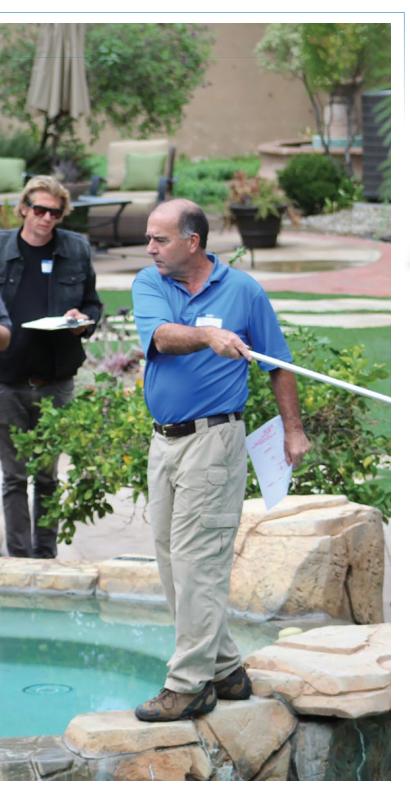
Worried about damaging your camera system on the job? Consider purchasing equipment coverage, which insures your inspection tools and equipment against theft and damage. We strongly recommend such coverage for expensive tools—even (and perhaps especially) those you rent.

# SEWER SCOPES AND HOME INSPECTIONS

Have a lot of older homes in your area? Are clients expressing interest in having their sewer lines inspected? Looking to make more money?

If you answered "yes" to any of these questions, perhaps it's time for your company to offer sewer scope inspections.





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When I'm done with this work, I want to be able to say I helped better the profession," said Bill Bryan, CREIA's California Inspector of the Year and Fducator of the Year.

t was shortly after Bill Bryan and his wife moved from Virginia to California and bought a house that Bryan thought, "I'd like to be a home inspector."

Bryan remembers being struck by his interaction with the home inspector who came to inspect his new southern California home. "It was a strange inspection," he said. "I thought, 'I'm paying this guy to do this?'"

Bryan, who spent more than 30 years in the military and also worked in construction for years, said he knew a lot about homes, but he was interested in learning more. He started rebuilding his house, essentially tearing his home apart down to the studs, and got to know a lot of California's rules. He was hooked and wanted to know more.

It was then that Bryan enrolled in Mike Casey's home inspection classes. Not long after he joined both ASHI and CREIA (California Real Estate Inspection Association).

# **WHY ASHI AND CREIA?**

It's a question Bryan pondered at first, when he encountered many colleagues joining both. Soon he understood why. "One of the guys says, 'It's really simple. ASHI is a national organization. You're known nationwide, and that's important. Anyone moving to California doesn't know what CREIA is, but they sure know what ASHI is."

Bryan said all it takes is one referral from ASHI to get a job, which in turn pays for ASHI registration for a year. "Well, how would you like two referrals from ASHI? That's a no-brainer," he said.

# **WHO IS BILL BRYAN?**

Bryan quickly got involved in the Orange County California ASHI/CREIA chapters, becoming vice president of CREIA the first year, then president. He's now the new CREIA vice chairman of the board. Often Bryan hosts in-person chapter meetings from his backyard, at least since the pandemic. "I love it. They say if you get a job you like you'll never work a day in your life."

Bryan is a Certified CREIA Inspector, a Certified ASHI Inspector, a National Swimming Pool Foundation–Certified Pool Operator, and a National Swimming Pool Foundation–Certified Pool Inspector. Together with Taylor Vreeken, the immediate past CREIA Chairman of the Board, Bryan teaches the National Home Inspectors Exam (NHIE). He also teaches a two-day residential pool course every year from his home.

In 2021, Bryan was recognized as both California Inspector of the Year and Educator of the Year by CREIA. He's currently working on writing a certification for pool inspections in California.





# **HOW HE GOT HERE**

Bryan started RSM Inspections, named for Rancho Santa Margarita where he is based, as a one-man show shortly after moving to California less than 10 years ago. While he's mentored many new home inspectors, he has no plans to hire other inspectors under him. Working this way allows him to do the work he loves and make time for family.

"I have all the work I can handle and I take time off for the family when I want to take time off. I'm not worrying about anybody else, and it affords me to spend more time with new inspectors doing the training and focusing on doing good inspections instead of mass inspections," he said.

Bryan has carved quite the niche for himself with his love and specialization in swimming pools. "I spend a lot of time on the California law and the California regulations—looking at what's going on with swimming pools and drownings and working on the prevention of drownings."

Bryan and Vreeken have taught the NHIE for three years, carving out 17 weeks a year, taking one chapter at a time. Bryan said their lessons focus on how to take the test, both getting students the knowledge they need but also helping them to be better test takers. Their lessons follow the same format as the exam they're preparing for. "We have a very high success rate. I think nine out of 10 right now pass the National Home Inspectors Exam."

Once students pass, Bryan and Vreeken take that training into the real world with ride alongs. "It's been very successful in getting inspectors toward certification. We spend a lot of time with them doing those types of things," Bryan said.

# **CERTIFICATION MATTERS**

ASHI-Certified inspectors agree to follow ASHI's Standard of Practice and abide by ASHI's Code of Ethics. Bryan said they not only have to pass the NHIE, but they pass background checks, too. "It's a win-win for everybody," he said. "It ensures these inspectors really know what they're talking about."

That's especially important in some places, where there may be a lot of inspectors who aren't ASHI-Certified and just trying to "make a buck." "In California there's no license requirement, so we tell everybody-you want someone certified."

Bryan said it's not uncommon to get calls from folks who only care about the fee—how much will it cost to have their home inspected? "There are inspectors who come in and undercut your bids and give the minimum inspection and that gives a bad name to home inspections," he said. "The buyers have no idea for the most part when they hire them. If somebody calls me wanting a quote I'll give them a quote but I tell them, 'If money is your only concern be very careful. I recommend you find someone who is certified. Be very careful who you hire and bring into the house."

# **ADVICE TO NEW INSPECTORS**

Bryan loves sharing what he's learned with new inspectors. He advises everyone to have someone they can lean on.

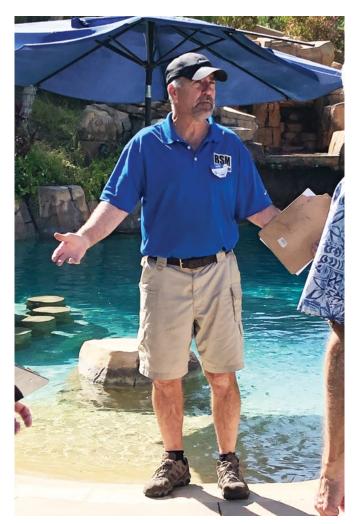
"Get a mentor," he said. "I make it a point to get all of the new inspectors together after a meeting and say, 'What are your questions?' because a lot of times they're afraid to ask questions in front of the veterans."

He emphasizes that there's no such thing as a stupid question, as you're going to need questions answered sooner or later, even if it's something basic. "I like talking with the new inspectors because I've only been doing this for seven years; I can relate," he said. "I'm learning at every inspection myself, and I don't think that's ever going to stop. I love that."









# NEW AFFILIATE LISTING AND PROFILES

By Kate Laurent, ASHI Creative Director



# Good news! We are excited to debut the newest feature on the ASHI website.

In August, we launched the new Affiliate Listing and Affiliate Profiles. The updated area of the website allows ASHI members to become better acquainted with our Affiliates. As part of this project, the Affiliate Membership program underwent a restructuring that included a more intensive curation of the companies approved or accepted for affiliation with ASHI.

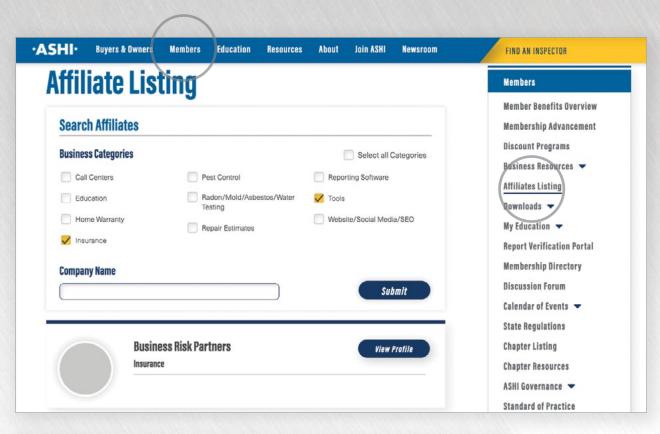
Keeping our members front of mind throughout this process, we wanted to ensure that our Affiliates bring you—the home inspector—added value and support for your business.

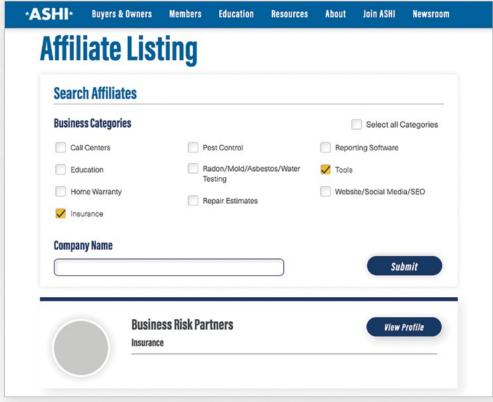
One of the goals for this project was to create a space for each of our Affiliates on the ASHI website that would allow them to showcase their unique offerings to the ASHI membership. Making connections within the ASHI community and working together to achieve our individual goals has remained a strength of ASHI throughout the years. We hope this update will foster positive relationships between our members, affiliates, and the association at large.

The Affiliate Listing can be accessed by visiting the ASHI website (ashi.org), going to the "Members" tab and, from the dropdown menu, choosing "Affiliate Listing." Once on the listing page, you may notice the new search function that allows you to search for affiliates by category or company name. By utilizing these search options, you can save time and find the Affiliate that meets the criteria for what you are currently looking to add or upgrade for your business.

From the listing, you can choose to view an Affiliate's profile. Once in the Affiliate Profile, you can see more details about the products and services they offer and learn more about their values or history. Connect and reach out to the company for any additional questions you may have, or easily "like" and follow them on a social media platform. In addition, the "Latest News" section of the Affiliate profile shows any current promotions they are running and, in some cases, an ASHI member-exclusive rate or offer.

We hope you find the updated Affiliates Listing a helpful tool and resource for your business. Supporting our Affiliates and learning from their diverse array of expertise is a great way to capitalize on belonging to the ASHI community!





By utilizing these search options, you can save time and find the Affiliate that meets the criteria for what you are currently looking to add or upgrade for vour business.

# Not inspecting isn't protecting

Did you know that you could still get a mold claim even if you don't offer mold testing? Protect yourself from these frivolous claims and more with the InspectorPro Endorsement Bundle.

# InspectorPro Endorsement Bundle

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Radon	Pool & Spa	Carbon Monoxide
Pest	Code	Non-Intrusive EIFS

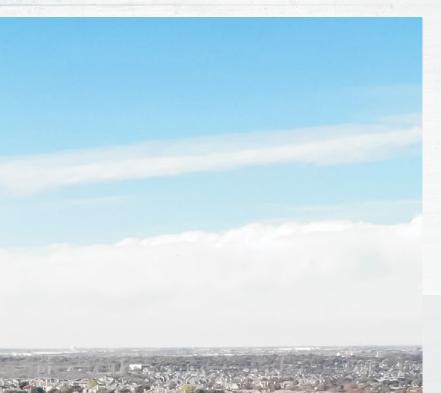




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Radon [222.0176]



n October, the National Radon Proficiency Program (NRPP) will implement a new certification of special interest to home inspectors: Radon Mitigation Compliance Inspector (RMCI).

The role of this inspection is to verify whether an installed radon mitigation system complies with the latest version of ANSI-AARST SGM-SF Soil Gas Mitigation Standards for Existing Homes. It only applies where a system is present. The credential will include secure access to the RMC Inspection phone app; once you submit the required photos and complete the checklist, the app will generate a PDF report you can send to your client directly from the site.



NRPP-certified Measurement Professionals who perform radon tests on behalf of the homebuyer know sellers often hire a mitigator after being informed the radon report revealed an elevated radon concentration. Shopping for the lowest proposal price they can find, some sellers are focused on acquiring a post-mitigation test report below EPA's Action Level and typically have no interest in the quality or safety of the installation. Besides receiving the post-mitigation report, purchasers who are so overwhelmed with everything else rarely pay further attention to the subject of radon or the mitigation system itself until well after closing.

Most of the complaints we receive at NRPP could have been prevented if a trained inspector had evaluated the installation and provided a detailed report to the buyer once the postmitigation test was placed.

# IF YOU PERFORM RADON TESTS

If you perform radon tests as part of your home inspection services, there is both a need and an opportunity to inform clients from the outset that if the radon test is elevated and the seller commits to having a soil gas mitigation system installed, they need you to return and perform an independent post-mitigation clearance test.

And, just as important, they need you to verify compliance with the ANSI-AARST SGM-SF Soil Gas Mitigation Standards for Existing Homes and provide a report identifying any deficiencies to be rectified prior to closing.

Since timing is always tight, they can have you complete the mitigation inspection quickly so the mitigation professional can be notified of any compliance issues well before the result of your post-mitigation radon test has come back.

Conscientious mitigation contractors are frustrated with the competitor who is uninsured, uses untrained installers, and cuts every corner to provide the lowest price in town. An increased likelihood of verification will motivate the corner-cutters to do the job right to begin with.

# INDIANA PILOT PROGRAM

AARST has been piloting a compliance enforcement program with the Indiana State Department of Health (ISDH). Using funds from its State Indoor Radon Grant, the Department contracted with AARST to perform 60 site inspections of systems installed by state licensed mitigators. ISDH intends to use these initial findings as an opportunity to educate measurement professionals as to future expectations. Beginning in September, AARST will conduct another 100 site inspections for ISDH.

Indiana's program regulates mitigators and measurement professionals by requiring certification by NRPP or the National Radon Safety Board and compliance with the ANSI-AARST standards. Adherence to the ANSI-AARST standards is also required by NRPP.

Effective July 2022, the new Colorado law (HB 21-1195) will also regulate mitigators and measurement professionals through certification by NRPP or the National Radon Safety Board and require that they follow the ANSI-AARST standards.

The other seven states that regulate radon professionals through private certification are California, Connecticut, Kentucky, New Hampshire, Rhode Island, Utah, and Virginia—while Florida, Illinois, Iowa, Kansas, Maine, Nebraska, New Jersey, Ohio, Pennsylvania, and West Virginia rely solely on in-state licensing.

See chart on the right.

Several other state radon program leaders have expressed interest in the Indiana pilot project. Radon program directors, along with radon professionals and other stakeholders, will be able to learn the results of the first round of inspections at the AARST International Radon and VI Symposium this October. AARST anticipates expanding the service to additional states and subcontracting with NRPP-certified Radon Mitigation Compliance Inspectors to perform the site verifications.

# THE PREREQUISITES FOR RMCI ELIGIBILITY ARE:

- NRPP certification as a Radon Measurement Professional or Mitigation Specialist,
- 2. Completion of an NRPP-approved 8-hour RMCI Exam Prep Course,
- 3. Pass the 50-question RMCI certification exam.

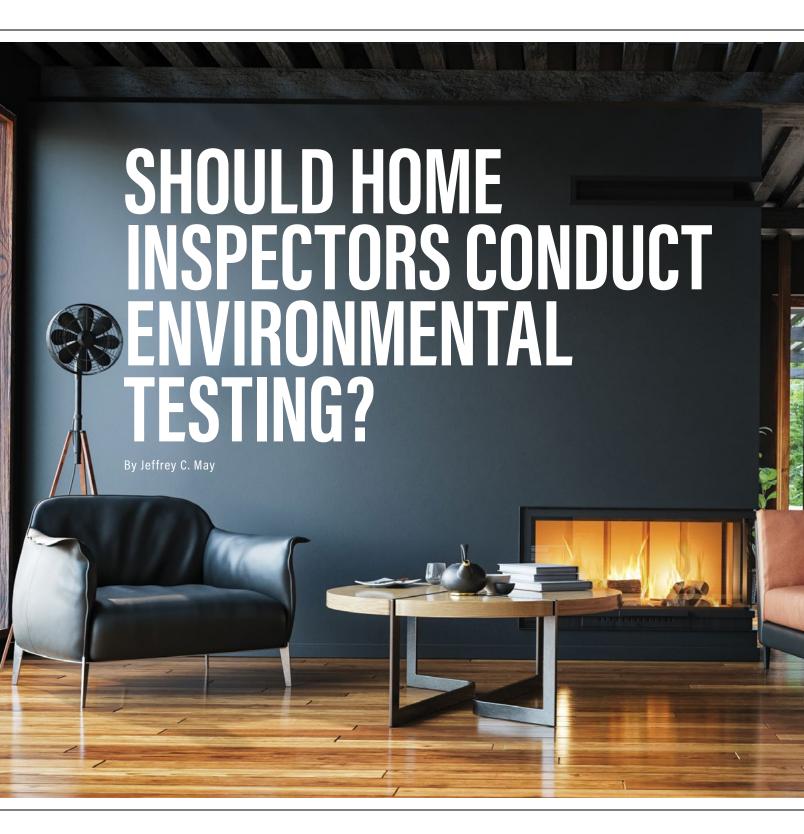
The initial offering of the RMCI Exam-Prep Course will occur at the Bethesda North Marriott Hotel and Conference Center (Rockville, MD) on Sunday, October 10, 2021, prior to the AARST International Radon and VI Symposium. Registration for the course and the symposium is available at aarst.org/symposium/tickets/.



State	Required Credential(s)		Current Standard(s) in Effect	
	Certification	License	ANSI-AARST	EPA, ASTM, othe
California	Х		ALL	
Colorado* ~	X	Х	ALL	
Connecticut	X		ALLL	
Florida		Χ	(Rule proposal underway)	ALL
Illinois		Χ	Multifamily	Single Family
Indiana*	X	Х	ALL	
lowa		Х	Measurement	Mitigation
Kansas		Х		ALL
Kentucky*	X	X	ALL	
Maine		X		ALL
Minnesota		Х	ALL	
Nebraska		X		ALL
New Hampshire	Mitigation Only		Mitigation	
New Jersey		X	(Rule proposal underway)	ALL
Ohio		X		ALL
Pennsylvania		X	Multifamily	Single Family
Rhode Island*	X	X	ALL	
Utah	Mitigation Only		Mitigation	
Virginia	X		ALL	
West Virginia		X	ALL	

<sup>\*</sup> Both license and private certification required ~ Effective July 2022







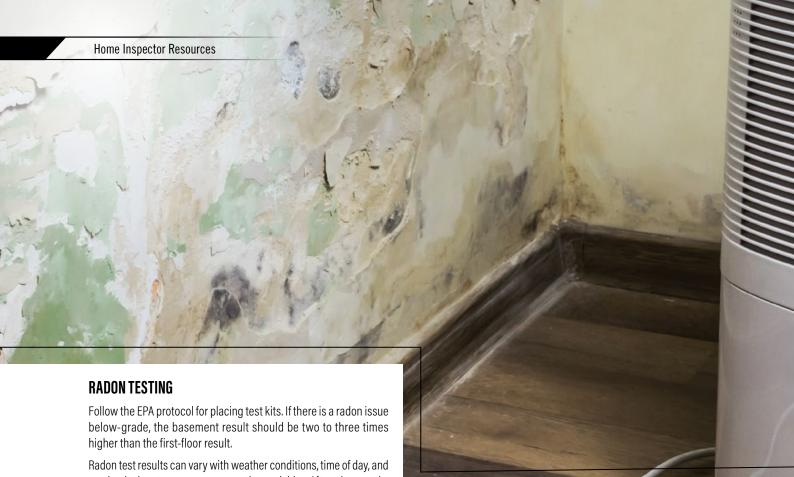
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Before becoming an indoor air quality professional, Jeff May was a contractor and home inspector. Still a loyal, retired ASHI member, he holds certifications as a Council-Certified Microbial Consultant through the American Council of Accredited Certification and as an Indoor Air Quality Professional through the Association of Energy Engineers. He is author or co-author of five books on indoor air quality published by Johns Hopkins University Press, including his latest, Edition 2 of My House is Killing Me! A Complete Guide to a Healthier Indoor Environment. If you would like to receive Jeff's free, quarterly newsletter ("IAQ IQ") for home inspectors, email jeff@mayindoorair. com. Examples of the newsletters can be found at www. mayindoorair.com.

ome inspectors are not required to do environmental testing in Massachusetts where I live. I understand, though, that there are a few tests for contaminants that some home inspectors conduct. It is important that anyone conducting such testing use methods that will result in meaningful results and seek clarification from the lab or an indoor air quality (IAQ) professional if he or she or the client has questions about those results.

Even if you do not include any environmental testing in your services and are not interested in doing so. I hope the information in this article will prove useful when your clients ask you questions about IAQ tests.



Radon test results can vary with weather conditions, time of day, and mechanical system usage, among other variables. After a heavy rain, diffusion of gases through wet soil to the outdoor air is very limited and outdoor air pressure may fall during a storm, so soil gases are forced to enter a basement at an increased rate. If a radon test you placed has a high result, you might recommend retesting with a continuous monitor. One radon tester told me the radon concentration in one home he was testing with a continuous monitor was close to zero most of the time but spiked to 100 pCi/L during a storm.

If you have concerns about the results of your radon tests using canisters, think about getting certified to use a continuous radon monitor that includes measurement of tamper variables like motion, temperature and humidity, et cetera.

At one home, I was surrounded by shrubs while inspecting the exterior foundation when the listing broker rushed past me carrying a brown paper bag. She must have been new at her job or thought I was the pest inspector, because she said to me, "I'm just returning the radon test to the basement; it's supposed to be picked up by the home inspector."

At a home inspection where I had a bad feeling about the seller, I drove very slowly around the block after placing the radon tests; when I passed the home in question a few minutes after leaving, all the windows had been opened!

# **TESTING FOR FORMALDEHYDE**

The best conditions for formaldehyde testing are when the relative humidity is above 50% and the temperature is above 70°F. The most accurate test kits use DNPH (dinitrophenylhydrazine); this test takes several hours of exposure for meaningful results.

The test badge is much like a radon test in that it is a diffusion test. Formaldehyde in the air diffuses into the badge and reacts with DNPH; the concentration of the resulting chemical combination must be analyzed by a lab. There are no decent "direct-read" instruments so do not buy one.

# ODORS, COMBUSTION SPILLAGE, AND NATURAL AND SEWER Gas leak testing

I use a TIF8800A combustible gas detector (which has been replaced by the TIF8800X) to track odor trails. This instrument produces a ticking rate that depends on the concentration of the gas or vapor. The stronger the concentration, the faster the ticking. The instrument is great for detecting spillage of combustion gases. One word of caution—the instrument is also sensitive to changes in relative humidity, so if you hold the sensor over a sink or toilet, the ticking rate will increase.

I was in one below-grade office that reeked of sewer gas. A sewer pipe was leaking in the basement of the adjacent, connected building. The two buildings shared an exposed stone foundation. The TIF8800A ticked very rapidly in several locations where the sewer gas was leaking through cracks between the stones. I have found dozens of utility gas leaks with the TIF8800A that gas company representatives failed to locate.



As air cools, its RH rises. Some species of mold, including the allergenic and friable Aspergillus and Penicillium molds, can grow when the RH is over 80%. Below-grade spaces are naturally cool and damp. You may see a dehumidifier in an unfinished basement or crawl space, but that doesn't mean the space has been adequately dehumidified since construction, so mold growth may be present.

And mold growth may be present in a finished basement if the space hasn't been air conditioned and/or dehumidified in the humid season and consistently heated in the heating season. Using a thermo hygrometer, measure the RH below-grade in a cool, exterior corner near the floor; if the RH is over 80% and there is a musty odor, consider recommending a mold inspection of the property.

# **CARBON MONOXIDE (CO)**

The Bacharach Monoxor Plus is an excellent instrument for measuring the concentration of CO in hot combustion gases; typical handheld instruments that only measure ambient air cannot do this.

If you only measure for CO in the air of a home, you may miss an important source if no one has been recently cooking. I have had three cases of clients who experienced headaches in their homes as a result of exposure to CO from gas stoves. In two of the cases, the CO (over 2,000 ppm) came from one burner of four on the cooktop. In the third case, the client only became sick on Thanksgiving when the oven was on all day to cook the turkey and pies for the relatives.

# **MOLD TESTING**

I do not attach much importance to the results of settle-plate (Petri dish) testing because results can be misleading. Most of the spores from indoor mold growth can be dead and thus don't grow in the dish, but mold spores remain potentially allergenic even when dead. In addition, spores from outdoor air that has infiltrated the home are likely to grow in the Petri dish.

There is one situation, though, where a Petri dish test can be helpful. If you wonder whether there is mold growth in exposed fiberglass insulation below-grade, you can do a "pat" test by gently pressing the dish against the insulation at two or three locations and then covering the dish. If many similar appearing colonies grow in the dish, there is probably mold growth in the insulation.

More than 50% of the "pat" samples I take from exposed basement insulation have mold growth; 100% of samples I take from ceiling insulation in crawl spaces have such growth.

The claim made by the NAIMA (North American Insulation Manufacturers Association) that mold does not grow on fiberglass fibers is correct. Fiberglass fibers are made of minerals, and mold cannot grow on minerals alone. Mold in fiberglass insulation is growing on the dust captured in the insulation fibers.



I patted this Petri dish up against exposed fiberglass insulation in a basement; this is the mold growth that occurred after four days. The many similarly colored colonies confirm that the insulation contained mold growth. Photo by May Indoor Air Investigations LLC

If you do air testing for mold spores using Air-O-Cell-type cassettes, it is important to follow certain steps for the most accurate and useful results possible.

- 1. Conduct the test first before you go into a musty, dusty space like a basement or crawl space. Otherwise, your clothing may have picked up mold spores that will contaminate the test and lead to a mistaken conclusion that there are mold spores within the given, tested space.
- 2. Before you conduct the test, be sure windows and exterior doors are closed for at least an hour (longer is preferable); otherwise, most of the spores in the sample you collect could be from outdoors. It is also a good idea to do an outdoor (control) sample for comparison.
- 3. If you do mold testing and schedule more than one inspection on any given day, change your clothing between inspections if you have been in a moldy space.

4. Simple numerical Pen/Asp spore counts can be very misleading. The presence of a single chain of five or more Pen/Asp spores indoors is a 100% indication of indoor growth no matter how much less the indoor concentration of Pen/Asp is than the outdoor Pen/Asp concentration. If the lab only gives Pen/Asp spore counts and does not report if the spores are in chains and/or clusters, you will miss an important finding.

In my experience, many labs have misidentified outdoor basidiospores (from mushrooms) as Pen/Asp or Asp/Pen spores (spores from Penicillium and/or Aspergillus fungi that typically grow outdoors in soil). Indoors, such soil molds are commonly found where conditions are damp, such as in basements and A/C systems. Be suspicious of any lab report that indicates an outdoor concentration of Pen/Asp spores that is greater than a few percent of the total outdoor concentration.



Aspergillus mold spores and conidiophores (the fruiting bodies of the organism). Micrograph by May Indoor Air Investigations LLC



# ENVIRONMENTAL RELATIVE MOLDINESS INDEX (ERMI) TESTS

The EPA developed this test as a means to compare the moldiness of homes to a number of houses that had been previously tested. In the original procedure, ERMI-test developers vacuumed up dust from two square meters of carpeting in a bedroom and a living room. The dust was then analyzed to see if it contained any of 36 species of mold divided into two groups: those species found in damp environments (Group I), and those found outdoors or in (presumably) non-moldy homes (Group II).

The DNA in the dust was analyzed by qPCR (quantitative polymerase chain reaction)—a complicated methodology that determines quantitatively the "spore equivalents" of a mold species present in a gram of dust. A curve based on a scale of minus 10 to plus 20 was then developed based on results from testing done in non-moldy and very moldy homes (an ERMI value is based on the difference between the sum of the log of Group II concentrations subtracted from the sum of the log of Group I concentrations).

# I HAVE SIGNIFICANT ISSUES WITH ERMI TESTS AS THEY ARE CURRENTLY USED:

Most people who conduct ERMI tests collect dust by wiping a cloth on many surfaces throughout a house, rather than collecting vacuumed dust from two square yards of living room and bedroom carpeting, so the cloth method of dust collection does not follow the strict protocol that was used to create EPA's ERMI curve. Thus the log Group I/log Group II calculation done for a cloth sample cannot be compared to an ERMI value based on the EPA curve.

While the ERMI test gives a historical picture of mold species that may be or that were once in a given space, it does not point to potential locations in which the mold growth may be located because dust is almost always collected from multiple surfaces. And in many cases, the mold spores detected in the ERMI tests were from outdoors.

I have looked at homes for buyers who did ERMI tests as part of their pre-purchase inspections. In some cases the ERMI scores were low, but there were serious mold problems in the home; in other cases, the ERMI scores were high, but there were no significant mold problems.

A technician for one of the labs that analyzes ERMI samples told me in confidence that more than 75% of the ERMI tests done with cloths provide ERMI values over 10; according to the EPA graph based on their testing using the correct protocol, no more than 10% of the homes tested had ERMI values over 10.

If you collect dust with a cloth for an ERMI test and a buyer declines to purchase a property based on the ERMI score, you could be liable to the seller. Therefore I'd discourage you from collecting dust for an ERMI test unless you follow the original protocol. Alternatively, ask your lawyer to compose some cautionary language about the validity of ERMI test results, and attach that language to your report.

# A 600/300 STUDY

I once compared the visible attributes of 600 "sick" homes (SHs) in which occupants were experiencing health symptoms to 300 "control" homes (CHs) I had inspected when I was a home inspector. For the Boston area, I found that 37% of the SHs had central air conditioning, as compared to only 19% of the CHs. In other words, a client with allergies is almost twice as likely to have health symptoms in a home with central air conditioning.

The reason for this discrepancy is simple. In most parts of the country, air conditioning coils become wet during operation. Any dust on the damp coil or in the wet condensate pan will serve as nutrient for microbial growth—typically bacteria, yeast, and/or mold growth. These organisms are the recognized cause for the infamous "dirty sock syndrome."

37% of the SHs had central air conditioning, as compared to only 19% of the CHs. In other words, a client with allergies is almost twice as likely to have health symptoms in a home with central air conditioning

If you are working with a client who has allergies, asthma, or other environmental sensitivities, and the property you are inspecting has central air conditioning, pay particular attention to the HVAC system. A corroded or stained overflow pan or blower cabinet is a clear sign of leakage and potential problems. You may want to recommend that the client hire an IAQ professional to conduct an inspection. And always recommend that an air-handling unit has a MERV-11 or better pleated-media filter and a sealed-to-the-exterior holder.



Soiled, stained overflow pan. Photo by May Indoor Air Investigations LLC



Mold growth inside a blower cabinet. Photo by May Indoor Air Investigations LLC

# I encourage you to open up mechanical equipment, including ERVs and HRVs, whether or not you are required to do so in your state.

# REMEDIATION STRATEGIES

I am not in the remediation business and have no financial or business relationships with any remediation companies, but if a client tells you that remediation work was done within a few months before the property was put on the market, your client could ask to see the following:

- The remediation proposal. Was it followed? Did it include sealing the surfaces once the mold had been removed? Was containment in place to prevent the spread of potentially allergenic dust? Did a professional remediation company do the work? Be suspicious of a remediation that used only fogging, because even if the fogging kills the mold, the spores will remain potentially allergenic unless the mold growth was removed. Be particularly suspicious if fogging was used to kill mold in wall cavities, as enough of the chemicals used cannot enter wall cavities despite what some companies claim.
- The PRV (post remediation verification) report. If the remediation work occurred more than a few months before the property was put on the market, a "passing" PRV might no longer be valid because mold could have reappeared in the interim if conditions following the PRV were again conducive to mold growth.

If your client has any concerns about the remediation work, he or she could schedule an IAQ inspection or confer with an IAQ professional.

# ASHI UPDATES MARK YOUR CALENDARS

By Marianne Sackett, ASHI Director of Communications



# WE CAN'T WAIT TO SEE YOU AT INSPECTIONWORLD 2022!

We are so excited to see you all again. The upcoming conference with an educational focus will be held January 16 to 19 at the Caribe Royale in Orlando, Florida.

Just minutes from Walt Disney World Resort, Caribe Royale blends homestyle comforts with top-notch hotel amenities across its 60 acres. Among your accommodations, you'll be able to take a dip in the pool, indulge in spa treatments, enjoy poolside libations and alfresco dining, or even reserve a bicycle to further explore what the area has to offer.

Walt Disney World is just 1.5 miles from the Caribe, and IW22 attendees qualify for special pricing to the parks during our conference. More information can be found on the IW22 website.

The Caribe also offers complimentary scheduled buses to Orlando's three hottest areas for dining and entertainment—Downtown Disney, Universal CityWalk, and Pointe Orlando.

Keep on the lookout in your email for more exciting news about IW22.

We're counting down the days, and we can't wait for us to all be together again! Thank you for being an ASHI member. We are so happy you're here.



access the nomination form on the ASHI website by following

About > Awards > Philip C. Monahan Award.





# SEPTEMBER ANNIVERSARIES



## **FORTY YEARS**

Christopher Monahon

# **THIRTY YEARS**

John P. Jennings Thomas G. Lauhon

## **TWENTY-FIVE YEARS**

Parris Bradley Steve J. Kroeckel Dan Pressman Anthony Tilenni Fred Yahya

## TWENTY YEARS

John Albright
David A. Artigliere
Roger Baker
KeithDumas
Mike Elsberry
Greg Jones
Joe Kovatch
Don Norton
Tim Oland
Joseph Poplawski
Donna Ranson
Eric Sunderland
David Thompson
Bill White

# FIFTEEN YEARS

Steven S. Campbell Michael Salinas John Yaroch

# **TEN YEARS**

Jeffrey Bentley
Jeff Broussard
Bert J. Cooper
Dave Edens
Ray Fellows
Christopher Feroli
Pete Lawrence
Tracey L. Litt
Dennis J. Pelczynski
Mark Thompson
Kevin B. Thompson. MET, CIT,

# **FIVE YEARS**

Jarrod Anderson
Jack S. Boain
Richard Domonkos
Karen Krieger
Daniel Lara
Anthony T. Mabry
Douglas C. Risk
Michael Schirmer
Mohan Singh
Glenn Stephens
Daniel Stevens
James Stinson
Jason Vernier
Stephen R. Walbolt

# **ASHI REPORTER BOARD MEETING REPORT OUT**

**MOTION:** Motion was made and seconded to approve the April 24, 2021 Board Minutes. PASSED

**MOTION:** Motion was made and seconded to approve the ASHI fiscal 2022 budget as presented. PASSED

**MOTION:** Motion was made and seconded to add ASHI Policy Manual Clause 14.1. PASSED

**MOTION:** Motion was made and seconded to modify ASHI Policy Manual Clause 12.1. PASSED

**MOTION:** Motion was made and seconded to modify ASHI Policy Manual Clause 2.5. PASSED

**MOTION:** Motion was made and seconded to modify ASHI Policy Manual Clause 17.2. PASSED

**MOTION:** Motion was made and seconded to modify ASHI Policy Manual Clauses 5.1.15 and 5.2.4. PASSED

**MOTION:** Motion was made and seconded to modify ASHI Policy Manual Clauses 5.1.18, 5.1.19, and 5.2.5. PASSED

**MOTION:** Motion was made and seconded to modify ASHI Policy Manual Clause 5.2.17. PASSED

# **CHAPTER EVENTS**

# NNEC-ASHI FALL EDUCATIONAL SEMINAR

WEDNESDAY, SEPTEMBER 22, 2021

- Basement Waterproofing
- Sump Pump Systems
- Interior Drainage Systems
- Crack Sealing, the Importance of Understanding Radon
- Rising Radon Levels—Choosing the Right Radon Mitigation System
- 5 Danger Levels of Indoor Air.
   Presented by Michael LaMalfa, Senior
   System Design Specialist and John
   Merna, Sales Manager of Erickson
   Supportworks

Jim Fusco, Granite State Trade School, Gas & Mechanical Instructor/Inspector is an instructor for courses in Natural and LP gas licensing, plumbing apprenticeship, heating and HVAC, occupational safety, and health (OSHA) and related building construction courses. An independent mechanical inspector and consultant he developed the first independent gas training instruction program for Granite State Trade School, which is one of four programs initially approved and accepted by the Office of the State Fire Marshall and initially with the Office of Post-Secondary Education in New Hampshire.

Puritan Conference & Event Center 245 Hooksett RD Manchester, NH 03104

8:30 AM Registration and Morning Refreshments

9 AM TO 4 PM Educational Seminar and Lunch NNEC Members — FREE Non-Members- \$150 Educational Credits: MA-6, NH-6 and ASHI-7

Reservations are required for this event by Wednesday 15 September 2021 It helps our planning if we know you are coming! Karen at 781-789-7040. karenvdickie@gmail.com (781) 789-7040

# **ASHI CHAPTER FALL SEMINAR**

The ASHI Suncoast Chapter is excited to have their Fall Seminar Live

*OCTOBER 29-30, 2021* — Hampton Inn in Oldsmar Florida.

There will be education on 4 Point Wind Mitigation, Stucco and Electrical.

For more information and to register for the event please visit: ashisuncoast.com or reach out to Neal Fuller at nealfuller60@gmail.com

# REGISTRATION OPENS SEPTEMBER 2021

JANUARY 16-19, 2022 ORLANDO, FL THE CARIBE ROYALE



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