

THE JOURNAL

INDIANA ENVIRONMENTAL HEALTH ASSOCIATION, INC.

Fall conference goes live!

The attendance numbers might have been down slightly, but enthusiasm was high as members and guests gathered in person for the first time in two years.



Following COVID mask protocols, Holley Rose, Conference Chair and President Elect welcomes attendees.

The 70th annual gathering at the Lawrenceburg Event Center drew 144 registrants for the two and a half day IEHA Annual Fall Educational Conference (AFEC).

The conference featured general session speakers on Monday, Tuesday, and Wednesday mornings and multiple breakout sessions Monday and Tuesday afternoons. The annual

awards banquet was held Monday evening.

Keynoting the event was Dr. Stephan Eliason, Health Officer and Medical Director of the Dearborn Co. Health Department. Dr. Eliason



spelled out the challenges he faced when accepting the position. Not only did he have a new job to learn, but it was the beginning of the pandemic. It taught him humility, he said.

Dr. Eliason added that much of his job is dealing with people handling the “arbitrary forces” of nature that he says can frighten people. He added that good communication is vital but difficult, and people don’t like not having answers. He said social media has added to the problems because of misleading information and disinformation.

Special points of interest:

- **This was the 70th AFEC.**
- **Attendance was down but enthusiasm was high.**
- **Meeting in person was valued by attendees.**
- **All the general and breakout sessions were popular.**

Spring conference slated for April

Conference chair Krista Click has announced the tentative date and location for the 2022 IEHA Spring Educational Conference. Mark your calendar for Thursday, April 21, at the Embassy Suites Conference Center in Plainfield, near the Indianapolis International Airport. More details will be announced.



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From the Ed desk



The DoubleTree Hotel overlooks the Ohio River and is connected to the Lawrenceburg Event Center.

Another *Journal* is ready for you to enjoy! This issue, coming on the heels of the fall conference as it usually does, includes numerous conference-related items from selected general speaker highlights to a few pictures. Dearborn County, including Lawrenceburg, DoubleTree, and the adjoining Event Center, again proved to be gracious hosts.

Share your *Journal* ideas at any time, preferable the sooner the better as the *Journal* is always an ongoing project. Contact Info is on the back page. Thanks for the support!

Ed

From the President Elect

Hello IEHA Friends!

I would like to express my gratitude and sincere appreciation to all our members and partners who attended and/or supported the 2021 IEHA Annual Fall Educational Conference in any way!

What a great opportunity for networking and learning as always. General session topics ranged from COVID-19 testing at Wastewater Treatment Plants, Zoonotic diseases, Legionella investigations, and Indoor Air Ventilation to mitigate the coronavirus, just to name a few. And, as always, the IEHA committees did a fantastic job in selecting speakers that provided educational value during the breakout sessions. We learned, we networked, we shared our stories with dear colleagues who we have not seen in the last couple years. We welcomed new Public Health individuals into IEHA, brought new partners and exhibitors on board this year and offered Seasonal Influenza as well as COVID-19 Vaccines.

This year defined us as an association while cementing our dedication to IEHA. We honored those whom we have lost, celebrated those who received awards, and, most importantly, we grew stronger as an association and remembered, as per the 2021 conference theme, "Why We Do What We Do". If you were unable to join us, I sincerely hope you will join us next April for our Annual Spring Educational Conference and again in September 2022 for our 71st Annual Fall Educational Conference. Meanwhile, get active in your local chapter, attend meetings as you can, and reach out to your officers or fellow members and offer to help. You will find a wealth of support, education, and friendships that will last a Public Health lifetime & beyond!

Holley M. Rose, 2021 IEHA President Elect

Holley

"This year defined us as an association while cementing our dedication to IEHA and growing stronger as an organization."

Roads that charge your EV on the way

One fear of drivers of electric vehicles is running out of battery power before reaching a charging station. But the Indiana Department of Transportation (INDOT) and researchers at Purdue University have announced their combined efforts to help solve the re-charging concern by enabling wireless charging via the road itself. The research will use a newly designed magnetizable concrete designed by a German company Magment GmbH.

An announcement from Purdue's Lyles School of Civil Engineering, says the project is part of the

Advanced Sustainability through Power Infrastructure for Road Electrification (ASPIRE) initiative, partially funded by the National Science Foundation involving universities, government laboratories, businesses and others working together to develop next generation charging capabilities.

Purdue says the first phases of the project will include pavement testing and analysis at Purdue followed later on by INDOT research on a quarter mile stretch of highway, to test the capacity to charge vehicles at high power. Following successful tests, INDOT

may elect to "electrify" portions of Interstate highways in Indiana.

INDOT Commissioner Joe McGuinness said, "As electric vehicles become more widely used, demand for reliable, convenient charging infrastructure will continue to grow making clear the need to innovate."

Nadia Gkritza, Professor of Civil Engineering and Agriculture and Biological Engineering, and ASPIRE Campus Director added, "Transportation is transforming in ways not experienced since the invention of the automobile."



"It may soon be possible to charge your EV while driving major highways."

Methane detecting satellite to launch

The release of methane into the atmosphere has long been known as a contributor to climate change. Thousands of small leaks are adding up to a major problem, but finding them all is a challenge.

But about a year from now, there may be a solution on the way. The environmental group Environmental Defense Fund (EDF) is planning to launch "MethaneSAT", a satellite that can spot

methane leaks, a task much easier performed in space than from the ground. EDF decided to become involved because it believes that cutting methane pollution in half by 2030 could slow the rate of global warming by up to 30%.

EDF involved research has revealed that the oil and gas industry is a much bigger source of methane leaks than once believed, coming from leaky pipelines, valves,

and equipment. With MethaneSAT carrying the most sensitive methane detector ever placed on a satellite, it will be able to pinpoint leaks on a map in nearly real time. That's a task not really possible from the ground. EDF plans to make its data public and apply pressure to polluters to correct leaks.

The satellite will detect a 2 parts per billion change in methane over a 0.4 square mile area.



MethaneSAT will launch in 2022 to detect the many small methane leaks on Earth, pinpointing them on a map.



Point your smart phone camera on the QR code above to visit IDEM's "What's in My Neighborhood" website.

Interactive information from IDEM

New websites offered by the Indiana Dept. of Environmental Management (IDEM) provide a wealth of information to users as Lynette Shrowe, Technical Environmental Specialist, explained to attendees at the AFEC.



Lynette said the wealth of information available

to anyone on the IDEM website using map-based resources with interactive maps, and the ability for users to

find information in GIS layers. "What's in My Neighborhood" section can show the status of environmental cleanups in up to 11 GIS layers. She said adding QR codes and a smart phone app are new innovations. Or go to www.in.gov/idem.

Lynette said that when called to investigate a contaminated site, restrictions will be placed on that location as to any future use of the land. This may range from informing a future owner of prior contamination

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that may remain, to a "no dig" notation telling the land owner that the ground's surface can not be broken.

All such information is available via the IDEM website and with the newly offered smart phone apps. The GIS mapping layers are very useful to find all the land information available. Lynette added that the "Virtual File Cabinet" offers access to 2 million public records.

Factory removes atmospheric carbon

"The new plant can potentially remove millions of tons of carbon yearly. It can remove carbon, not just recycle it."

A model factory in Iceland, called the "world's largest", has gone online and can remove up to 4,000 tons of carbon dioxide from the air each year, according to the company Carbfix. The process includes separating the carbon from the oxygen, mixing the carbon with water, then driving it deep under ground into rock where it can then mineralize.

The company adds that removing this amount of carbon is equal to taking about 870 cars off the roads. Plus the positive

result is obtained faster than just planting trees. The company says that a tree can take 50 years to gather that much carbon and sequester it. A tree that lives less than that has accomplished little.

The company says the new factory can be scaled up by a factor of 80, potentially removing millions of tons of CO₂ in a decade. Swiss company Climeworks provided the CO₂ intake fans

and is active in carbon removal technology.

The new plant, built in Hellisheidi, Iceland, is next to a geothermal power plant and runs on renewal energy.

(information from Carbfix and reported by *Good News Network*)



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Major award winners announced



Left, Andrew Pappas received the 2021 Environmental Health Specialist of the Year award. Center, Wabash Valley Chapter was the winner in 2020 and 2021 of the Harry E. Werkowski Memorial Award, and right, Brenda Cummins received Environmental Health Specialist of the Year for 2020. Jo Ann Merdado was the presenter.

With chicken eggs, does color matter?

What is the difference between white chicken eggs and brown chicken eggs? If you said, “color”, you pretty much nailed the answer. But, the *Taste of Home* website dug deeper to unscramble an answer.

It reports that the two colors are structurally

the same, with brown eggs coming from chickens with brown feathers and red ear lobes, white eggs come from birds with white feathers and white ear lobes.

But is there a nutrition difference? If there is, then it comes from what the chicken might eat.

For example, chickens that forage in the sun (pasture-raised) might contain several times more Vitamin D. The chickens’ diet will also affect taste.

But does the shell color matter. Not really. The information on the carton will tell you more.

“There was no nutritional difference based upon shell color. It depended upon the birds’ diet.”

Ida was bad, but not the worst

Hurricane Ida was a devastating storm, causing massive flooding, structural damages, and power outages, but it wasn’t the worst storm to hit the United States. According to *MSN.com*, that dubious honor goes to the Galveston hurricane in September, 1990, with

winds near 140 mph and a storm surge of 15 ft. As many as 8,000 people died, representing about 20% of the area population. Thirty six hundred buildings were destroyed and damage estimates, in today’s dollars, neared \$516 million.

But storms in other parts of the world have been worse. The worst storm ever recorded, says the *Farmers Alamac*, struck Bangladesh in 1970 and killed over 300,000 persons.



The hurricane that struck Galveston in 1990 was believed to be the worst storm to hit the U.S.



Crisis Cleaning, (right), and Infiltrator Water Technologies (left), have been long time high level sponsors of IEHA conferences. There were 15 exhibitors at this year's gathering.



Left, president elect Holley Rose, and past president Jason Ravenscroft checked out the vendors during a conference break.

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Legionella still around in Indiana



Mike Sutton (above) and Madison Asbell (below) talked about Legionella in Indiana.



“Keep the water moving”. That was the mantra Mike Sutton stressed to the audience attending the 70th Annual Fall Educational Conference held in September in Lawrenceburg. Mike, along with Madison Asbell, said Legionella, which causes Legionnaires disease, is prevalent in Indiana and can be fatal. Up to 25% of long term care patients who contract the disease could die, they said.

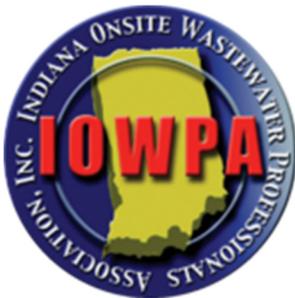
One of the best ways to prevent the formation and spread of the bacte-

ria is eliminate standing water. Hence the repeated admonition to “keep the water moving.”

Legionnaires disease is contracted by inhaling water droplets that contain the Legionella bacteria. Mike and Madison listed three contributors to contracting the disease. One, water droplets are present that contain the bacteria. Two, the victim is exposed to it, and three, is susceptible to it. They both agreed that smokers are more susceptible, as are cancer patients.

Standing water with a pH less than 8 can allow a biofilm to form containing the bacteria. Dead end water lines and water reservoirs can be a bacteria source.

The key, they said, is a water management program and being proactive in preventing conditions that contribute to bacteria growth. Being aware of the disease has led to more cases being reported that might have been missed before. Guidelines for mitigation are available from the CDC and FDA, they said.



“Support our sustaining members who keep IEHA going strong!”



IEHA member numbers listed

Jason Ravenscroft, IEHA Membership chairman has announced the current member numbers for the association.

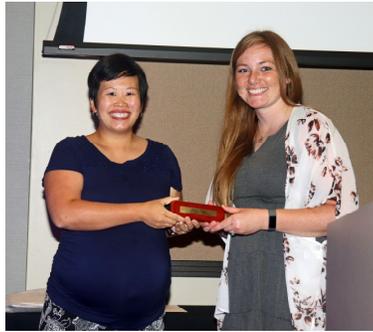
- 1 Associate
- 2 Honorary
- 41 Lifetime
- 22 New members
- 331 Regular members
- 1 Retired
- 2 Student
- 11 Sustaining

Total: 389 members



Linda Briles was presented the Sanitarian Emeritus award for 2020.

Additional IEHA awards presented



Clockwise from the top, Lauren Hagen won Rookie of the Year honors, Nicole Corwin received the Rookie of the Year award for 2020, Holley Rose gave the Past President award to Jo Ann Mercado. Lisa Harrison won the Tim Sullivan Memorial Award for 2020, and Holley Rose presented Mike Mettler with the Chris Ulsas Volunteer of the Year award for this year. Some categories were not awarded in 2021.

(Photo credits in this issue to Ed Norris, unless otherwise indicated.)



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Patty Nocek, past IEHA president, sets the example by getting vaccinated during the 70th AFEC. *(photo credit Holley Rose)*

Conference dates set

Put the 2022 conference dates on your calendar.

The IEHA Spring Conference is tentatively set for April 21, 2022, at the Embassy Suites Conference Center in Plainfield.

The next Annual Fall Educational Conference is slated for September 19 to 21, at the Abe Martin Lodge at Brown Co. State Park in Nashville.

Details will be announced as plans are finalized.

Natural GPS guides bees at night

Bees know how to find their way around. On any warm day, close observation will reveal bees buzzing from flower to flower, going after the nectar and gathering pollen. And every night, the more than 20,000 species of bees find their way back to the right bee hives. In fact, as reported in the *Spokane Spokesman-Review*, a single bee species only collects nectar and pol-

len at night, roaming from a bit after sunset to an hour before sunrise. It's so dark in the area of Panama where this bee resides, a human can't see a hand extended out in front.

Researchers wanted to know how bees could reliably find their way around. Humans remember landmarks to get around. Bees seem to do the same thing, looking through the tree canopy

above them, which gives a particular pattern of the night sky. They know to return to that same spot, where the hive is located.



Researchers say light pollution from artificial light can confuse bees as well as other migrating animals that move at night. Turning off unneeded lights at night can be a huge benefit.

Light pollution can be detrimental to bees' ability to navigate at night.

How fast is a "knot", and why?

Unless you are into boating, spent time in the Navy, or just like all things nautical, you've probably heard the word "knot" but don't know for sure what it means. Same goes for "nautical mile", too.

Cruise Hive recently offered an explanation. It comes down to marine navigation. Distance and speed are measured differently on water than on land. To start with, there are no street signs on water, so "Turn left on Main St." would have no meaning. So a different "map" is needed - one that uses the longitude and latitude of the Earth. These coordinates will determine a precise location, allowing for the

Earth's curvature.

Before we get to a knot, one should know a Statute Mile is a mile on land. A Nautical Mile is a distance equal to 1.15 statute miles. Finally, one nautical mile is equal to *one minute* of latitude.

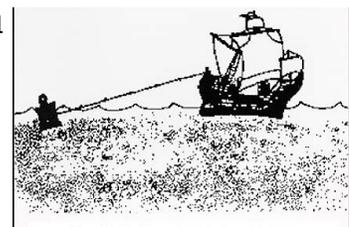
So, how fast is a knot? A Knot is a unit of speed and is the same as one nautical mile per hour. Translated, this means that one knot is the same as 1.1508 miles per hour.

But what about the basic question, why the word "knot"? *Cruise Hive* credits 17th century history. Remember that sailors did not have the sophisticated technology we have now. Back then,

a "common log" was used, which was a simple solution that consisted of a rope with knots tied at regular intervals and connected to a piece of wood or "log". The wood was tossed overboard behind the vessel and the rope would unwind. Seamen would then use an hour glass to measure the passage of a specific amount of time. Sailors would then retrieve the rope and count the number of knots between the wood and the ship. This gave them the approximate speed, which became "knots."

It wasn't perfect but close enough at the time.

"Without landmarks, distance on water had to be measured differently."



A rope with "knots" hooked to a "log" was tossed behind a vessel. After a specific time, the rope was retrieved and the knots counted.

Dealing with rodent zoonoses

“In cleaning up, it is important to spray with water first. Do not sweep or vacuum, which can aerosolize particles.”

What are zoonoses? As Dr. Jennifer Brown, State Public Health Veterinarian explained, it refers to rodent diseases that can be transmitted to humans. She told attendees at the recent Annual Fall Educational Conference that most likely such diseases go under reported.

Rodent diseases like Hantavirus known in the southwest United States are also found here. Such diseases if transmitted to humans can

lead to meningitis. Many people keep rodents as pets, she said, but pet rodents can also carry zoonoses, so proper handling is essential for safety.



First line of defense is to keep rodents out. Plug possible entry points, and use traps to catch rodents. Remove potential food sources (like garbage) that might be an attractant.

Dr. Brown stressed that particles from rodents can be easily aerosolized allowing them to be breathed in. She said if nesting materials or droppings are found, it is vital to spray them down first before attempting to wipe up or remove anything. Do not dry clean, sweep, or vacuum, which can only spread any diseases.

She said that the most prevalent plague in history (*Yersinia Pestus*) was spread from rodents and claimed the lives of millions in multiple outbreaks.

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Vendors help conferences succeed

Sponsor support keeps conference registrations among the lowest of any similar event elsewhere.

In need for the services they provide? Then show them your support.

Two businesses contributed at the *Platinum* (highest) level,

Crisis Cleaning and Infiltrator Water Technologies. Other levels included *Gold*, *Silver*, and *Bronze* levels and included Indiana Onsite Wastewater Professionals Association, Indiana Restaurant and Lodging Association, and Meijer.

Also sponsoring the conference were HealthSpace USA, Inc., Indiana Board of Registration for Soil Scientists, and the Indiana Immunization Coalition.

Ventilation important in schools

Ron Clark, IDOH, Industrial Hygienist, said air ventilation in schools is a serious concern. He told



attendees at the recent AFEC that elevated levels of CO₂ can adversely affect learn-

ing, adding that proper ventilation is important. He investigates school air quality complaints.



Many sponsors were also exhibitors at the IEHA conference. (Photo credit Brenda Cummins)

Next year's conference dates set

The Annual Fall Educational Conference dates for 2022 have been announced. Mark your calendars for September 19 to 21, with pre-events on September 18.

The location is Abe Martin Lodge in Brown Co. State Park near Nash-

ville, Indiana. The park features two large lakes and 16,000 acres of wooded area including many trails. The lodge includes a huge water park inside.

Conference chair Jennifer Heller says she plans to bring back the

golf outing on Sunday, but the rest of the general schedule will remain the same with general sessions during the mornings, and breakout sessions two afternoons.



Abe Martin Lodge at Brown Co. State Park will host the 2022 fall IEHA conference.

Plastics end up in landfills anyway

You do your part and toss plastic waste in a container marked for recycling and assume it's saved from going into a landfill. But how much plastic gets recycled for reuse? Not much, it turns out.

Science News reports that despite our best intentions, most of the plastic we think gets recycled ends up as trash. Only two types of plastic used in plastic beverage

bottles, milk jugs, and detergent containers are easily recycled in the U.S. But those make up only about a quarter of the world's plastic trash.

Science Advances says those recycled plastics aren't good for much. Melting plastic down changes its consistency and it must be combined with new plastic for a usable product. The result is a darker plastic good for making waste

containers or park benches.

The problem with most plastic, like food containers, is they're made from plastic layers, and those layers would have to be separated for recycling. Items like grocery bags tend to get tangled in the machinery and are too flimsy to handle.

Melting down some plastics leaves a dark messy product not usable.

"5,000,000,000,000 - the number of plastic bags used worldwide every year."

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Monitoring wastewater for viruses

The city of Carmel Utilities has taken initiative to perform general monitoring for SARS-CoV2 virus or COVID-19 virus. Tara Washington explained during the recent AFEC how the utility can monitor wastewater for the presence of the

virus. While this is a "more passive" approach than individual testing, it does provide useful information about the prevalence of the virus.

She said it was important to measure wastewater

where people live where it might be generated. She said students (for example) tend not to use school bathrooms.

The Carmel Utility monitoring is part of the CDC's virus monitoring program.



Tara Washington describes how Carmel monitors for COVID.

IEHA is an Indiana not for profit corporation since 1951.

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"The Mission of the Indiana Environmental Health Association, Inc. is to promote, preserve and protect environmental public health in the state of Indiana, and to encourage a spirit of cooperation among all environmental health stakeholders while serving its members in the regulatory, industry, and academic communities."

More about IEHA



The Indiana Environmental Health Association, Inc. (IEHA) was founded in 1951 as the Indiana Association of Sanitarians (IAS). There were 16 charter members. The name was officially changed to the

Indiana Environmental Health Association in 1985. IEHA is affiliated with the National Environmental

Health Association (NEHA), and the International Association for Food Protection (IAFP).

IEHA is comprised of eight regional chapters. They are Central, East Central, Northeast, Northwest, Southeastern, Southern, Wabash Valley, and West Central. There are four standing committees, which include Food Protection, General Environmental Health Services, Terrorism And All Hazards Preparedness, and Wastewater.

The operations of IEHA are governed by an Executive Board that meets regularly. The Board and various standing committees are made up of voting and non-voting members. Information plus meeting dates, times and locations for the chapters and standing committees may be found on the IEHA website listed on this page. All meetings are open to any member or guest but only "voting members" may vote or hold an office.