



Kansas Environmental Health Association

www.keha.us

2016

Spring Newsletter

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MESSAGE FROM THE PRESIDENT



Ann Mayo, MS, RS



Dear Members:

No, I did not win the \$1.5 billion lottery but I am happy for the folks that did. We are getting more sunshine as our day length increases. I have enough food to eat and I am warm. The things that are important in my life are for the most part positive. All in all, I am facing this new year with optimism.

With the new year in front of us I would like to update you on activities the KEHA Executive Board hopes to accomplish for our membership this year

Financial Accounting

Our main policy issue for 2016 is Functional Financial Tracking and Auditing. The Board has purchased new software to assist in financial reporting to the Board and the membership. The reports being generated will provide usable financial information. This information will be formatted in a manner that can be easily understood by the membership. Current plans are to provide financial information to the Board on a quarterly basis. The new information will be rolled out at the Spring Conference. The Board has established a three member auditing committee which is chaired by Guy Crabill. Bronson Farmer and Scott Schwinn complete the committee. Audits are commonly completed at or near the Fall Educational Conference. The committee will establish procedures to be utilized by future committees conducting an audit.

By-Laws

The Board will once again review the organization's by-laws and recommend updates to the members for adoption. We expect the 2016 updates will be minimal. If you have any recommendations or suggestions please contact a board member. Expect to receive recommended changes by email at least a month before the Fall Educational Conference. We look forward to receiving your comments before a vote is taken at our annual educational conference to adopt any changes.

MARK YOUR CALENDARS!!

Wednesday, September 28 to
Friday, September 30, 2016

2016 KEHA FALL CONFERENCE

Bluemont Hotel
1212 Bluemont Avenue
Manhattan, KS 66502



Membership and the Cost of Educational Conferences

KEHA currently has 55 active members. We continue to explore ways to cut administrative and conference costs. You should expect to see some changes in our Annual Educational Conference this Fall.

Conference Preparations

Your First Vice-President, Guy Crabill, is in charge of our educational conferences this year. Please contact him with any ideas you may have on topics or speakers you believe would contribute to your educational experience. The Spring Educational Conference has been set for Thursday, April 7 and Friday, April 8, 2016 at Rock Springs. The Fall Annual Educational Conference will be held in Manhattan at the Bluemont Hotel on September 28, 29, and 30, 2016. Registration materials for the Spring Educational Conference may be found in the body of this newsletter.

The KEHA Executive Board is continuing to explore options to cooperate with other organizations to sponsor our educational conferences, especially the annual conference. We expect to have more information to present to the membership at the KEHA Annual Educational Conference this Fall.

Academic Cooperation

The Board will be contacting various colleges and universities to determine if interest exists in cooperating in research related to environmental health issues. We hope this will be the beginning of some very fruitful relationships between the faculty and students at our higher learning institutions and KEHA. In addition, we hope to be able to bring in speakers that are working on research projects of interest to our members.

If we can do anything to assist you in your work, please do not hesitate to contact a board member or come to one of the board meetings. Our general meeting date is the first Wednesday of the month but this date is subject to change as the need arises. Contact any board member for the next established meeting time.

Respectfully,

Ann Mayo, RS
President
Kansas Environmental Health Association

Spring Conference 2016 Topics include

- * Ground Water Contamination of Private Wells * Pool Inspection Protocol
- Radon Resistant New Home Construction
- * Zoning and Onsite * Flood Plain Insurance * KHF Grant Opportunities



Kansas Environmental Health Association

2016 Spring Conference Registration

April 7th & 8th, 2016

Rock Springs 4-H Center

Please return completed form via email ASAP to: browlands@kdheks.gov

NAME: _____

ORGANIZATION: _____

ADDRESS: _____

TELEPHONE: _____ EMAIL: _____

Conference Registration (Lodging and Meals included):

KEHA member\$120.00 \$ _____

KEHA **non-member**\$140.00 \$ _____

2016 KEHA Membership Dues\$20.00 \$ _____
(January 1 to December 31, 2016)

Bill Spaniol/Jo Funk Scholarship Donation \$ _____

TOTAL AMOUNT DUE.....

(Money does NOT have to accompany form)

Please make sure information is complete and include one form for each person attending the conference.
This information will be used to update the KEHA Membership list.

Please send **payment** along with a copy of the registration form to:

Beth Rowlands, KEHA Treasurer
P O Box 1969
Lawrence, KS 66044-1969
Phone: 785-842-4600

Administrative Use Only:

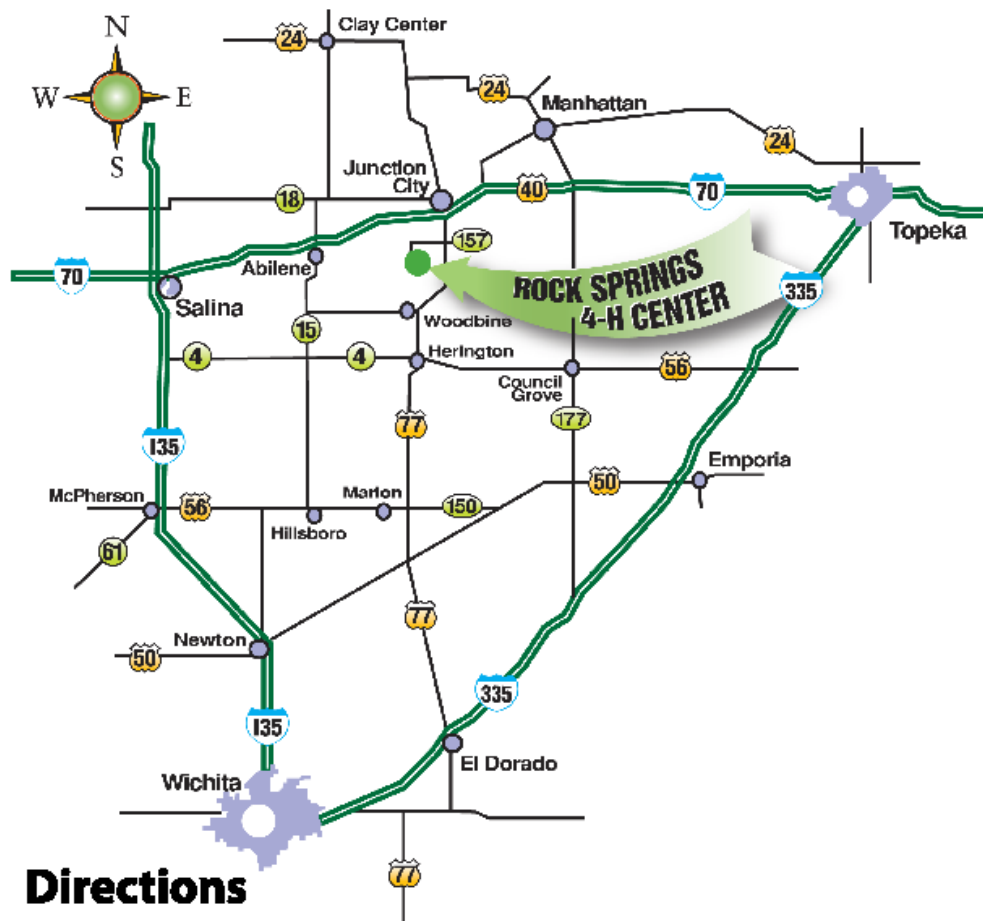
Beth Rowlands, KEHA Treasurer

Date: _____

Amount: _____

KEHA Spring 2016 Conference Map & Directions

The conference is located at Rock Springs 4H Center, just south of Junction City, KS. From the junction of I-70 and US Highway 77, travel eight miles south on US 77. Turn right (WEST) at the junction of K157 and follow the blacktop highway 4 miles west to Rock Springs. Registration will begin at Noon on Thursday, April 7th, 2016 at Wiedemann Dining Hall where conference sessions will be conducted. Lodging will be



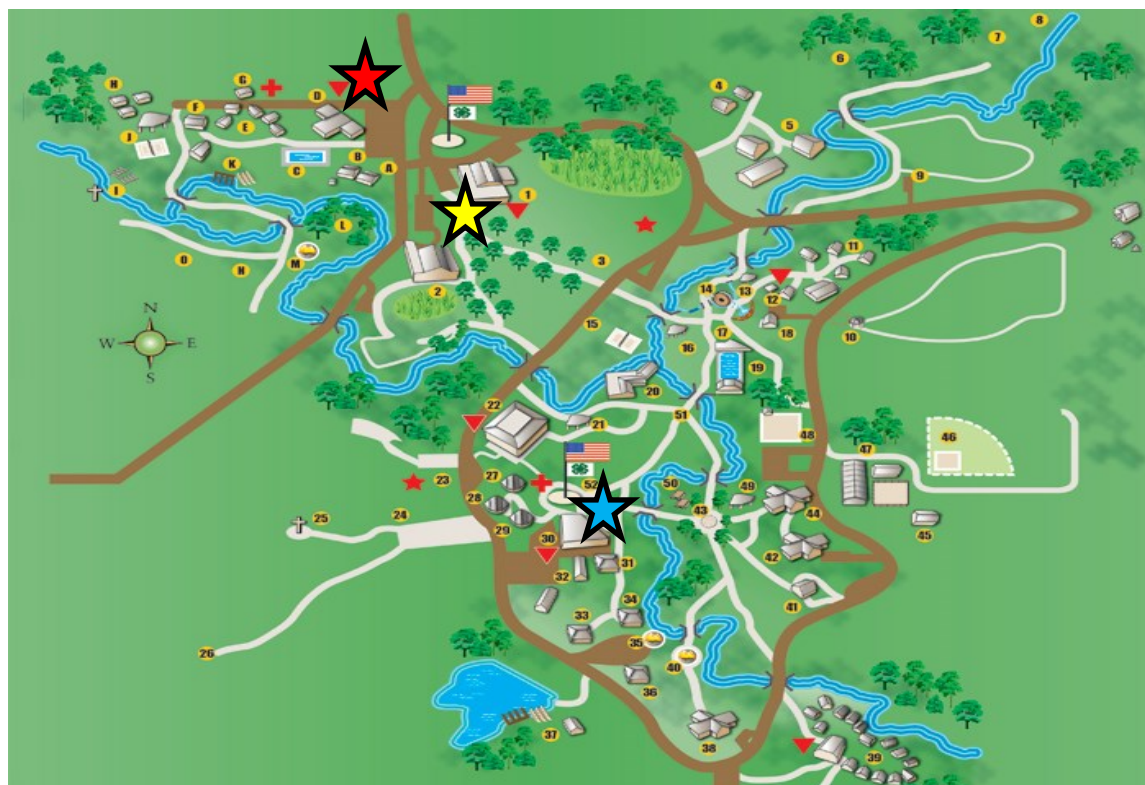
Directions

From Kansas City

Take I-70 west.
From the exit of I-70 and US 77 (Exit 295) travel 8 miles south on US 77.
Turn right on to K-157 Highway.
Follow K-157 four (4) miles west and south to the entrance of Rock Springs.

From Wichita

Take I-135 north.
Take exit 33 (north of Newton) to US 50, travel 26 miles north.
At the junction of US 50 and US 77, take 77 north past Herington to K-157 Highway.
Turn left on to K-157 Highway.
Follow K-157 four (4) miles west and south to the entrance of Rock Springs.



-  Wiedemann Hall
-  Leadership Lodge
-  Williams Dining Hall



One of Rock Springs most prized retreat residences, the Earl W. Parsons Leadership Lodge was completed in 1998 with funding through generous private donation. This popular facility is available year-round, and hosts 82 persons at full capacity. A progressive layout promotes group interaction, making this lodge a popular choice for guests of all ages. Leadership retreats and family reunions especially prefer the Leadership Lodge.

The building consists of 14 bi-level suites, two of which are handicap accessible. Each suite comfortably holds 4-5 guests. Twelve of the suites are configured with a set of bunk beds and one full-sized bed on the lower level, as well as two twin beds on the upper level. Both levels have a vanity with sink, and the lower level of each suite has two showers and one toilet, separately located for convenience and privacy. The two handicap accessible suites are configured slightly differently to accommodate the special needs of Rock Springs' guests.

In addition, each suite has heating and air conditioning, as well as a small seating area. Amenities such as towels and linens are provided with use of the Leadership Lodge. Centrally located vending machines and a kitchenette, equipped with a coffee maker, microwave and small refrigerator, add to the modern appeal. The lodge also has a great room connected to a spacious outdoor patio. The great room is furnished with a fireplace and grand piano; wireless internet is also available for guest convenience.

For more information, please contact Rock Springs by calling (785) 257-3221 or emailing administration@rocksprings.net.



Wasp Spray Used for Defense

6 Reasons Why Wasp Spray is Not a Substitute for Pepper Spray

A September 28, 2015 article condensed from:

Extension: Issues – Innovation – Impact (Part of Cooperative Extension Service)
<http://articles.extension.org/pages/70030/6-reasons-why-wasp-spray-is-not-a-substitute-for-pepper-spray>

The use of wasp spray for defense is being suggested to classroom teachers and others as a means to stop an invader entering classrooms in Kansas. The following information discusses reasons why such a defense could lead to problems and should not be recommended. A better choice is to select a product designed for defense.

Janet Hurley, an Extension Specialist with the School Integrated Pest Management (IPM) program through Texas A&M AgriLife Extension Service, got many questions from school districts at the beginning of this school year. Hurley provided one example, "A school district in north Texas was inspecting its campuses at the beginning of the school year. The IPM coordinators kept noticing cans of wasp killer in the offices of the school secretaries. Since the school follows IPM and has a policy about only licensed applicators making pesticide applications, the coordinators began to ask questions. Apparently, the secretaries had heard from a law enforcement person who said a can of wasp killer could injure an attacker at 10 feet and therefore would be a way to keep an intruder from school."

Why wasp spray should not be used for defense

There's no research to suggest wasp spray would stop an attacker.

Using a pesticide in a manner other than according to labeled directions is a violation of federal law (the Federal Insecticide, Fungicide, and Rodenticide Act).

It is illegal (finable offense) for anyone to recommend a use other than the labeled use.

Personal liability is likely to be significant for a person who deliberately sprays another person with a pesticide.

Pesticides such as wasp spray have not been tested on humans. Direct human toxicity data comes from records of accidental exposures and suicide attempts.

Poison control records document an amazing number of people who have accidentally sprayed themselves or innocent bystanders when using aerosol cans. An emergency situation may exacerbate that reaction.

Pepper sprays

Capsaicin, the active heat ingredient from cayenne peppers, is used in the temporarily debilitating pepper spray weapons for personal protection. Canisters of pepper spray (also known as OC spray or oleoresin capsicum) dispense a solution containing capsaicin, an inflammatory agent which affects the eyes, respiratory system, skin and muscle coordination.

Wasp sprays

The active ingredients in most wasp sprays contain pyrethrins or pyrethroids. They are derived from a species of the chrysanthemum plant and affect the nervous system.

More information:

- Insect sprays, <http://www.epa.gov/kidshometour/products/ispray2.htm>
- The University of California Berkeley Police Department, in its campus safety guidelines, lists the physical effects of pepper spray: <http://police.berkeley.edu/documents/campus-safety/maceandpepper.pdf>
- Snopes.com tracks urban legends, <http://www.snopes.com/crime/prevent/waspspray.asp>

President Signs Bill Banning MicrobeadsCBS NEWS *December 31, 2015*

A bill that will phase out certain wash off beauty products that contain microbeads was signed by President Obama in December. These cosmetics include face washes, toothpaste and shampoos. The Microbead-Free Waters Act (H.R. 132) bans cosmetic products containing microbeads, including those from “bio-degradable plastics” due to lack of biodegradation in marine environments. The ban phases out manufacturing by July 1, 2017 and sale by July 1, 2018.

MUD TRAP GUIDANCE**Jennifer Nichols****KDHE North Central District Office**

The Kansas Department of Health and Environment (KDHE) has recently received several inquiries regarding mud trap disposal options. Disposal options of mud trap wastes from a commercial car wash operation are discussed in the KDHE guidance document SW-1994-G3, Mud Trap Guidance.

Commercial car wash mud trap waste has historically been found to be non-hazardous. Mud trap waste can be disposed at a permitted landfill after solidifying or dewatering. Landfills need to request a special waste disposal authorization for the material, which can be provided upon request from KDHE. The mud trap guidance document indicates what information is to be submitted to receive this authorization.

Another disposal option that may be considered is land application upon approval of the site by a KDHE district office. The federal EPA 503b rule for septage land application specifies that septage does not include commercial or industrial wastes or wastes from grease traps. A septage hauler pumping a commercial car wash would have to utilize an empty truck for the load or have a truck dedicated for mud trap waste pumping.

Since mud trap waste generally has no nutrient value, land application provides an alternative for disposal but is handled differently than KDHE beneficial use approvals. The mud trap waste can be applied wet or dewatered prior to spreading. Dewatering may be done with synthetic filter bags, trough, or evaporation from an aboveground tank. Dewatering is necessary when field conditions are not suitable for application, such as wet or frozen ground.

The land application area should be chosen to meet setbacks from surface water and water wells. In addition, the land owner needs to implement appropriate measures to stabilize the site and prevent the applied mud trap waste from running off the property. This can be accomplished by maintaining crops or other vegetative cover.

Waste from mud traps other than commercial car washes do not have the option for land disposal. Mud trap waste from other businesses must be tested to determine if it is hazardous waste. If the mud trap waste is determined to be hazardous, disposal must comply with Kansas statutes and regulations regarding hazardous waste. If the waste is found to be non-hazardous, it can be disposed at a permitted municipal waste landfill after a special waste disposal authorization has been obtained.

Some wastewater treatment plants may have the ability to accept mud trap waste. Each permitted wastewater facility should determine if they can accept mud trap waste and still meet their permit effluent limits. The wastewater plant must be contacted for permission prior to disposal.

KDHE's Bureau of Waste Management is working to review and update the current guidance document for mud trap wastes. The current mud trap guidance document can be found at <http://www.kdheks.gov/waste/techguide/SW-1994-G3.pdf>. The website for KDHE also has a link to the district offices showing the counties served by the offices.



A billboard on the Caribbean island Martinique reads "You have a guest..." and shows a picture of a mosquito -- part of a campaign to fight against the Zika virus.



By

JESSICA MARMOR SHAW

SENIOR EDITOR

The Zika virus has been called a [global emergency by the World Health Organization](#) (or, to parse words, the rise in cases of babies born with abnormally small heads and its potential association with the Zika virus is a global emergency).

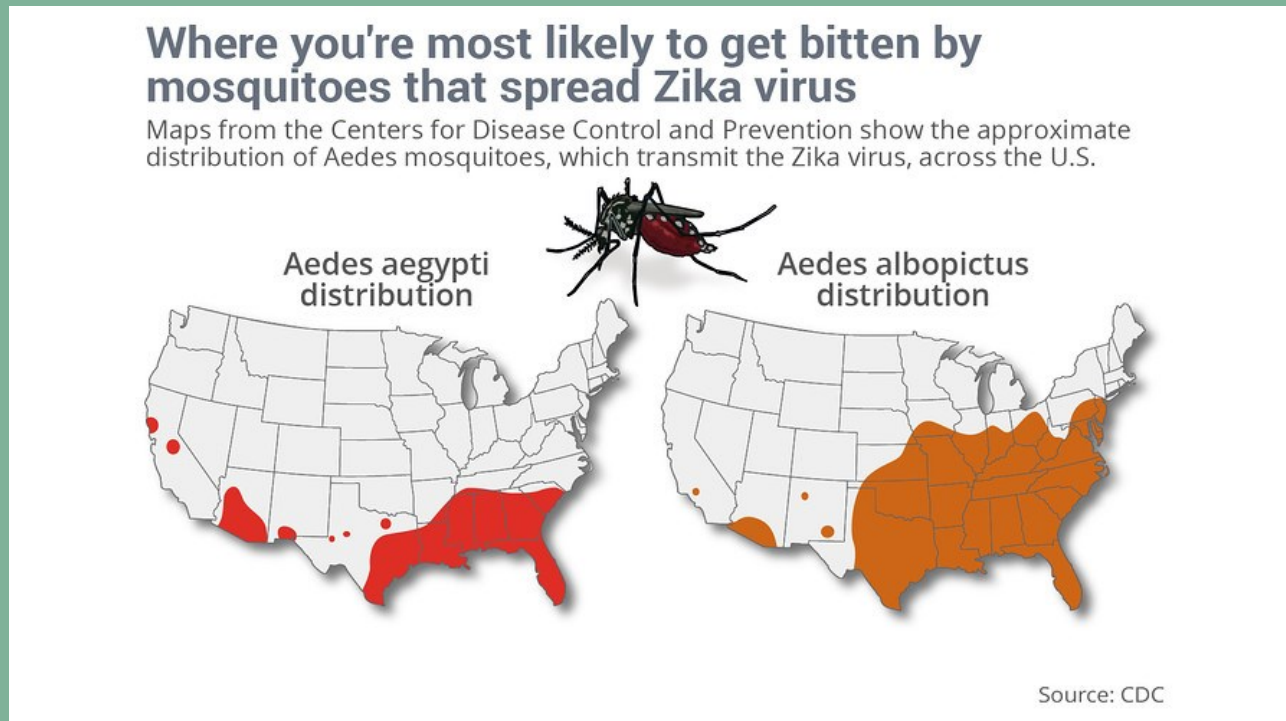
A virus that virtually no one the world over had heard of just a few months ago is now a major topic of conversation -- and concern -- for travelers, couples, pregnant women, doctors and, of course, public health officials. Though everyone seems to be talking about Zika, there are still a lot of questions that go unanswered in most news reports on the virus.

[Related: What exactly is the Zika virus, and why should you care?](#)

On Monday -- at the same time that the WHO made its announcement -- a Columbia University professor of epidemiology (the branch of medicine that deals with disease distribution and control) [took questions about Zika on Reddit, where many people weighed in with just those kinds of questions.](#)

1. Where in the U.S. are you most at risk of contracting Zika?

How and where and when Zika will hit the U.S. is of foremost concern to a lot of Americans -- and what should be done about it. The professor, Stephen Morse, points people to this map, from the CDC:



Morse also said: “We’ve already seen imported cases in a number of states. Probably, most of them will not spread. The Gulf States, including Florida, have the conditions where the virus could gain a foothold. Mosquito control is still important and will make the difference.”

The CDC maps show two species of mosquito -- one known to transmit Zika, and one that Morse says some people believe could transmit Zika. “Some people think a different species, *Aedes albopictus*, also shown on the map could possibly transmit Zika virus. That would extend its range considerably. But we don’t know if it’s as efficient,” he said.

One reader was particularly concerned about their home state of Florida, in particular, South Florida. Morse responded: “It remains to be seen whether there will be local transmission in Florida and other Gulf States. In the meantime, take the usual precautions against mosquitoes such as mosquito repellent, screens on windows, and draining containers with standing water.”

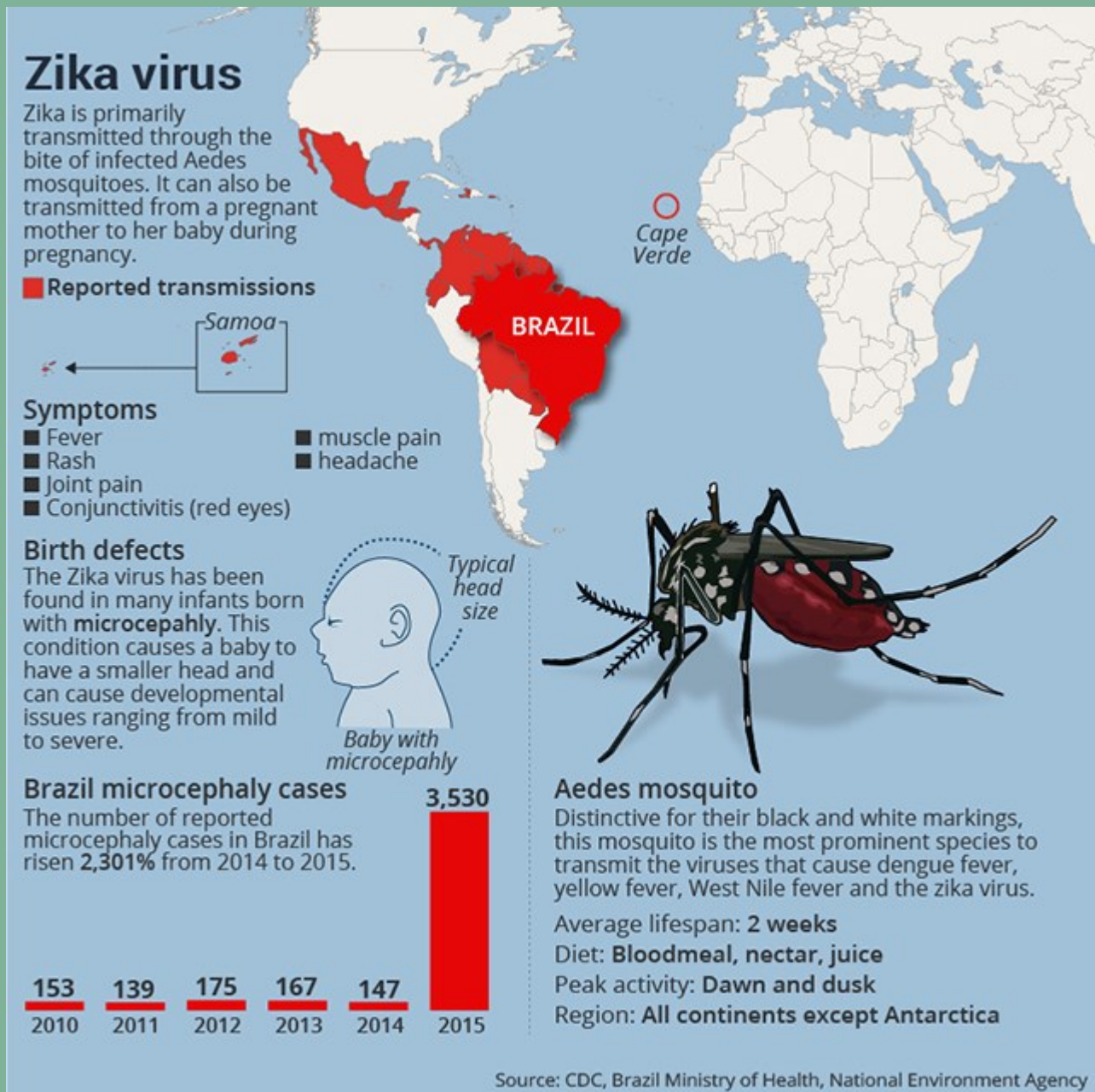
2. What is the effect of Zika on children?

One reader asks a good question: “If a newborn, infant or toddler were to get bitten, would the virus cause them issues, or is it just in utero?”

Morse’s answer: “We don’t have a lot of data, but Zika infections in young children seem the same as in older people.”

3. Should mosquitoes be eradicated?

Mosquito and infectious disease specialists are favoring focusing on suppressing population size or genetically modifying the pests over a vaccine -- but the Zika virus's frightening spread has led many to wonder if we shouldn't just [kill off all the mosquitoes in the world](#). One Reddit user asked Morse's view on this. His response hedged, and probably wasn't what many may have hoped for: "We don't know what the effects of ridding the planet of mosquitoes would be. They are food for animals like bats. Obviously, it would be good to greatly reduce their population, especially those that carry disease."



4. Is Zika sexually transmitted?

Several people wrote in with questions about Zika transmission -- particularly if it can be transmitted through bodily fluids or sex. Morse responds: "I don't think it is easily

transmitted through bodily fluids, with a few exceptions. We've seen a few cases of transmission through blood transfusion."

On sexual transmission: "There is one really well documented case sexual transmission from male to female. That was a researcher who was studying Zika in Polynesia and came back to the U.S., fell ill with Zika, and his wife became infected shortly afterward. There has been one other case, but the evidence isn't quite as strong."

On Wednesday, [the CDC said a person in Texas has contracted the Zika virus through sexual contact](#). The individual was a sexual partner of another individual who had recently traveled to an area where Zika is circulating and tested positive for the virus after returning home, the agency said.

[The Zika virus has been found in saliva and urine](#) -- leading to disagreement among scientists about whether pregnant women should be advised to avoid kissing anyone showing possible symptoms. But, Morse said, the going thinking is in most cases transmission will happen through the mosquito.

5. How long does Zika stay in the body?

If you do catch Zika virus, unless you're pregnant, it isn't likely to cause severe sickness, and it won't stay with you very long. "We're still learning about this, but usually the virus remains in the body for maybe a couple of weeks," said Morse.

6. What are the long-term risks if you contract Zika?

By far one of the more popular themes among all the questions for Morse was about the long-term risks of contracting Zika virus.

He said: "We think once you're recovered that the virus is probably gone from the body." (Versus something like chickenpox, which stays in the body.)

One reader asked if a woman who contracted Zika, then become pregnant much later would still be at risk to see birth defects in her fetus.

It's too soon to know for sure, Morse said, but probably her fetus will be OK: "There is insufficient data on the question of whether it is safe for a woman who has been infected with Zika to get pregnant later. But given what we know so far, she should probably be safe after recovery."

Another commenter chimed in that, according to the CDC, "there is no threat to later pregnancies. The threat is when the pregnant mother becomes infected, and the threat is only for the baby currently being carried."

7. If you get Zika, are you immune to it afterward?

Does someone infected with Zika develop immunity to the virus and, if so, is that immunity lifelong?

Morse says: "Yes, but we don't know if immunity is lifelong."

Another commenter pointed out, though, that immunity is dependent on virus strain: If the Zika virus were to mutate, people with the previous strain of Zika may not be immune to the new one.

And, on that note, another person asked: What is the potential for pathological mutation of Zika virus?

Morse said: "On mutation, we really haven't seen this happen with Zika to any significant extent. Of course mutations happen, but we haven't seen it make a significant difference in severity of transmission."



Including Pets in Disaster Preparations

Article submitted by Beth Rowlands

Since Hurricane Katrina struck New Orleans in 2005, major changes have been made to federal and state emergency planning laws with respect to animals. At the time, there were no laws that required that animals be evacuated, rescued or sheltered in an emergency. The lack of provisions for pets put human health and safety in jeopardy because some pet owners chose to weather the storm at home for fear of what would happen to their animals. As a result, federal and state laws have been passed to include provisions for evacuation of animals, rescue and recovery, shelters and tracking in disaster plans.

In 2006, the federal Pets Evacuation and Transportation Standards (PETS) was passed. PETS directs the Administrator of the Federal Emergency Management Agency (FEMA) to develop emergency preparedness plans and ensure that state and local emergency plans take into account the needs of individuals with pets and service animals during a major disaster or emergency. Since then, over 30 states have adopted either a law that deals with disaster planning and pets or have made known administrative plans on the subject.

The Kansas State Animal Response Team (KSART) is coordinating efforts to develop a regional plan for animal response teams in Kansas. The goal is to build proficiency in resources and be prepared to support every Kansas County in the event of a disaster. Following the regions designated by the US Department of Homeland Security, Kansas will have 7 regions, including one for the Kansas City Metro Area.

For contact information on your regional animal response team please go to:

<http://kssart.org/response-teams/regional-animal-response-teams>

What you can do . Follow 3 simple steps to include your pet in your family's disaster plan.

1. **PACK a PET Go-Bag**
2. **EVACUATE** with your PET
3. **TAG & ID** your PET

For more information visit the KSART webpage: <http://kssart.org/my-pet-project-family/>

KANSAS RADON PROGRAM

Where does radon come from?

Radon comes from the natural radioactive decay of radium and uranium found in the soil beneath the house. The amount of radon in the soil depends on soil chemistry, which varies from one house to the next. Radon levels in the soil range from a few hundred to several thousands of pCi/L. The amount of radon that escapes from the soil to enter the house depends on the weather, soil porosity, soil moisture, and the suction within the house.

How does radon get into the house?

Houses act like large chimneys. As the air in the house warms, it rises to leak out the attic openings and around the upper floor windows. This creates a small suction at the lowest level of the house, pulling the radon out of the soil and into the house. You can test this on a cold day by opening a top floor window an inch. You will notice warm air from the house rushing out that opening; yet, if you open a basement window an inch, you will feel the cold outside air rushing in. This suction is what pulls the radon out of the soil and into the house. You might think caulking the cracks and the openings in the basement floor will stop the radon from entering the house. It is unlikely that caulking the accessible cracks and joints will permanently seal the openings radon needs to enter the house. The radon levels will still likely remain unchanged. Fortunately, there are other extremely effective means of keeping radon out of your home. Throughout the country, several million people have already tested for radon. Some houses tested as high as 2,000-3,000 pCi/L; yet, there hasn't been one house that could not mitigate to an acceptable level. Mitigation usually costs between \$800-\$2500.

What is the general procedure for testing a home for radon?

Two standard methods exist for testing a home for the presence of radon gas. Short-term testing methods are designed to provide a quick radon value. Short-term tests can be as short as 48 hours and as long as 90 days. Long-term testing methods are designed to provide an annual average of radon gas. Long-term tests run for a minimum of 90 days, and usually for 6 to 12 months. The EPA recommends performing a short-term test for radon. If that test comes back below the EPA Action Level (4.0 pCi/L), then no further immediate action is warranted. However, the home should be tested again after any air sealing work, heating/air conditioning system changes or foundation modifications. If the short-term test returns with a radon value of 4.0-10.0 pCi/L, the EPA recommends performing a long-term test to gauge the home's annual radon concentration. The results of the long-term test should be used to determine the necessity of radon mitigation (reduction). Another option is to conduct a second short term test if quicker results are desired. If the first short-term test returns above 10.0 pCi/L, then the EPA recommends performing a second short-term test to verify the results and using the average of the two short-term tests to determine the necessity of radon mitigation.

Where can I purchase a radon test kit?

Consumers can purchase radon test kits for their homes from a number of outlets. The Kansas Radon Program distributes short-term radon test kits through the Kansas State University Research and Extension service. Consumers can contact their county Extension office and inquire about availability and costs, which are under \$10, inclusive of all costs. Instructions on how to perform a test using these kits are available at www.radon.com/radon/instructions.html (link is external). Most home improvement stores also stock or can order a variety of test kit brands. Additionally, radon test kits can be purchased directly from the manufacturers, many of whom are listed elsewhere on this website.

Are test kits for measuring radon gas accurate?

Yes. The largest source of error in radon testing does not come from the type of device used, but rather from the failure to maintain appropriate closed house conditions during the period of the test. It is important to carefully follow test kit instructions if you want accurate results. The accuracy of almost all commercially available radon measurement devices has been evaluated in the Environmental Protection Agency's (EPA) Radon Measurement Proficiency Program (RMP). This program exposed the devices to established radon levels and returned them to the company or individual for evaluation. A minimum passing requirement was that the result must have been within plus or minus 25% of the established radon levels. Most devices have better performance at the EPA guideline level of 4 picocuries per liter of air. Laboratories and measurement service providers have quality assurance programs and controls to maintain reliable performance and accurate results.

How is radon removed from homes?

The primary method of radon reduction (or mitigation) involves the installation of an Active Soil Depressurization (ASD) system. An ASD system involves the installation of a venting system that removes radon gas from the soil beneath a house's foundation. The system includes a 3- to 4-inch PVC vent pipe, a continuously running suction fan and a system indicator. The PVC vent pipe is installed through the foundation into a small pit that is dug out by hand through the insertion hole (which often has to be drilled out). The pipe is then routed either up through the house and exited through the attic and the roof or routed to the exterior of the house and up the wall with the terminus above the eave line of the house. If the vent pipe is routed through the house, the suction fan is usually installed in the attic. If the vent pipe is routed up the outside of the house, the fan is mounted near ground level. The system indicator is mounted at some visible location below the suction fan. Most systems use a simple U-tube manometer to indicate that suction is being exerted in the pipe by the suction fan. ASD systems can be adapted for use with all foundation types (basement, slab-on-grade, crawl space, or mixed foundation types) and is the most cost-effective and most efficient means of reducing elevated indoor radon.

What about radon in well water?

Underground well water can transport the radon from the soil into the house, when taking a shower, doing laundry, or washing dishes. The EPA says it takes about 10,000 pCi/L of radon in water to contribute 1.0 pCi/L of radon in air throughout the house.

What about radon in city water?

If your water comes from a municipal reservoir supply, you need not worry about radon in the water. When radon in water is stored in a reservoir for more than 30 days, the radon decays away to practically nothing. Every 3.825 days half the radon disappears through natural radioactive decay.

What is the risk of radon exposure?

Scientists believe radon exposure is the second leading cause of lung cancer. When radon decays, it shoots off alpha particles. These are small, heavy, electrically charged, sub-atomic particles consisting of two protons and two neutrons. If an alpha particle strikes the chromosomes in a lung cell, it could alter the way that cell reproduces. Our body's immune system should recognize and destroy these mutant cells before they can multiply over the next 10 to 20 years into a recognizable cancerous growth.

Some people's immune systems are better than others. Because of these inherent differences, radon doesn't affect everyone the same.

How serious a risk is radon?

According to the following EPA radon risk chart, radon is a serious health problem.

If 1,000 people were exposed to this level over a lifetime who are:

Annual

Radon Level....Smokers.....Never Smokers

20 pCi/L....26% or 260 people.....4% or 36 people could get lung cancer

10 pCi/L.....15% or 150 people....2% or 18 people could get lung cancer

4 pCi/L.....6% or 62 people.....0.7% or 7 people could get lung cancer

2 pCi/L.....3% or 32 people.....0.4% or 4 person could get lung cancer

Do scientists agree that radon is dangerous to breathe?

There is little disagreement that breathing the hundreds of pCi/L of radon that caused thousands of uranium miners to get fatal lung cancer is definitely harmful. Many scientists disagree with the EPA about what the level of radon should be before it should be reduced.

The EPA studied the lung cancer risk of uranium miners exposed to 400 pCi/L. They assume the risk of a homeowner exposed to 4 pCi/L to be one hundredth as much. Based on this assumption, the EPA guideline level of 4 pCi/L represents a much greater risk than allowed for other environmental pollutants.

What factors should I look at in deciding whether to mitigate or not?

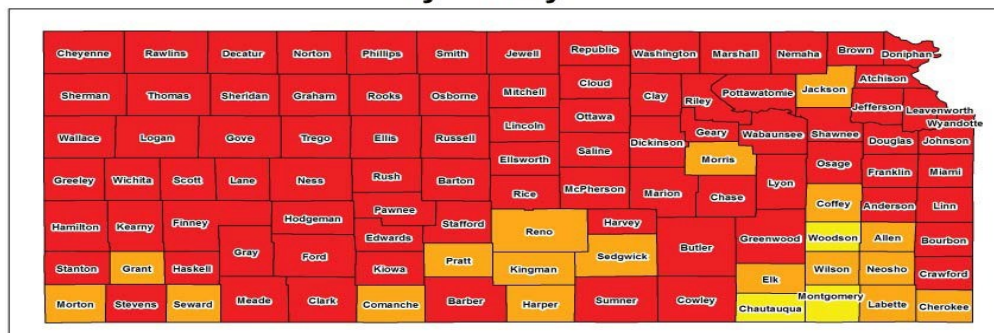
Cigarette smokers should keep their exposure to radon as low as possible. Smokers have eight times the risk from radon as non-smokers. If the house was tested in an infrequently used basement, it may have measured a radon level that is higher than the actual level you are exposed to, spending most of your time upstairs.

People with young children should be more concerned with the possible consequences of radon exposure 20 years from now than someone in their late sixties or seventies.

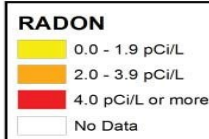
Families with a hereditary predisposition of cancer should be more concerned about radon exposure than families who don't have any history of cancer.

If you work for a company that might transfer you in the future, your employer probably will hire a relocation company to purchase your home. Today, most relocation companies insist that the house test below 4 pCi/L before they will buy it.

**2015 Kansas Radon Average Values
by County**



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Affiliate of the National
Environmental Health
Association

The Objective of the Kansas Environmental Health Association is to promote competency and effectiveness in sanitarians and other environmentalists engaged in the regulation of the Kansas environment including, but not limited to, food service establishments, commercial food preparation facilities, dairy products businesses, meat processing plants, bakeries, commercial lodging and hotels, swimming pools, water supplies, wastewater treatment and disposal, solid waste collection and disposal, air pollution control, radiation control, hazardous waste materials management, pesticide usage, institutions, schools, nursing homes, hospitals and health care facilities, recreational camps and public events.

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Seen on the back of a septic pumper truck: "Satisfaction guaranteed, or your merchandise cheerfully refunded." <http://www.ttlg.com/forums>

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As a guitarist, I play many gigs. Recently I was asked by a funeral director to play at a graveside service for a homeless man. He had no family or friends, so the service was to be at a pauper's cemetery in the back country. As I was not familiar with the backwoods, I got lost.

I finally arrived an hour late and saw the funeral guy had evidently gone and the hearse was nowhere in sight. There were only the diggers and crew left and they were eating lunch. I felt badly and apologized to the men for being late. I went to the side of the grave and looked down and the vault lid was already in place. I didn't know what else to do, so I started to play.

The workers put down their lunches and began to gather around. I played out my heart and soul for this man with no family and friends. I played like I've never played before for this homeless man. And as I played 'Amazing Grace,' the workers began to weep. They wept, I wept, we all wept together. When I finished I packed up my guitar and started for my car. Though my head hung low, my heart was full.

As I opened the door to my car, I heard one of the workers say, "I never seen nothin' like that before and I've been putting in septic tanks for twenty years." <https://www.reddit.com/Jokes>