

For the Health of It

Clark County Health Department

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VOLUME 2
ISSUE 3

NOTABLE NEWS

CONSTRUCTION UPDATE

Construction continues at 1201 Wall Street, the new health department. The first floor is beginning to take shape, and with few renovation surprises! The second-floor designs are completed and waiting on a contract to be awarded. The timeline for completion of the project is still very fluid, but hopefully we can be moved and operational by end of year!!!

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HEALTH CARE PROVIDER SURVEY

As we have mentioned in previous editions, The Clark County Health Department has received a \$10,000 grant for the purpose of educating individuals and doctors offices about lead poisoning and blood lead testing, as well as reporting requirements in Indiana. You may have noticed our billboards up in the county, or you may have seen our informational posts and videos on social media sites.

We also want to learn more about communication or reporting issues that may arise during the lead screening process. This is where you may be of help! We have initiated a brief survey for health care practitioners. This survey should be completed by one individual at each office. You can find the link here:

<https://www.surveymonkey.com/r/LCC85MW>

or from our main webpage: follow the "Environmental Health" tab and the "Lead Poisoning" selection. The more information we receive, the better we can serve our community.



REHS

Two of your local Health Department environmentalists, Brandon Perkins and Alyssa Underwood, have recently passed the NEHA (National Environmental Health Association) exam to become Registered Environmental Health Specialists (REHS). This exam is important because it sets a standard of excellence and shows the development of knowledge in the profession. A Bachelor's Degree and two years of experience is required before sitting for the exam.

CCHD now has 7 REHS credentialed Environmentalists, showing our dedication to the health and safety of our community.



HOW TO CATCH A BUZZ IN THE GARDEN THIS SUMMER

Summertime has finally arrived. That sweet smell of freshly mowed lawn lofts through the warm breeze as you bask in the ambience of those beautiful blooms you worked so hard for. Birds are chirping and bees are buzzing. Well, the bees used to buzz around here.

During recent years the only buzz from bees you might have heard are the headlines of a steady decline in their numbers. Researchers believe that pesticides, pathogens, parasites, and nutritional problems all play a role. How we treat our lawns and gardens at home can also have an effect on our pollinating pals. Here are several helpful tips to help create a more bee friendly outdoor oasis.

- Include native plants and flowers to your garden or lawn. Native plants have evolved in ways that are beneficial to pollinators of their specific regions. They grow in varying shapes and sizes and produce flowers that allow certain pollinators access to the nectar or pollen. Native plants have also adapted to their specific region's seasons and will bloom during certain parts of the year, times which pollinators have relied on for eons to forage and store food.



- Allow blooming plants to grow into the lawn such as Dutch white clover or violets. Follow the one third rule in mowing so the flowering parts can regrow.



Follow the proper pesticide/herbicide instructions from the label. Treating the lawn and garden with insecticides and herbicides can cause plants to absorb harmful chemicals through the roots which can end up in the pollen or nectar causing harm to pollinators.

- Spray insecticides or herbicides at dusk or dawn. Bees are less active during those times and it will allow pesticides to dry before bees come into contact with the plants.
- Don't spray plants that are in full bloom and avoid spraying blooms all together. Try to avoid micro-encapsulated or dust type insecticides. These particles are similar in size to pollen and can be carried back to the hive.
 - Instead of pesticide, plant species that are resistant to pests.
 - Natural pesticides can be made from substances such as neem oil, essential oils, castile soap, and Epsom salts. Plant Chrysanthemums in the garden. They contain a natural compound that repels pests called "pyrethrum." Hand weeding is preferred but vinegar can also be used as an effective herbicide.



Native *Asclepias incarnata*, swamp milkweed. Photo by Matthew Darling

Follow these tips and you're sure to catch a little buzz in your garden this summer!

MOSQUITOES SUCK!

In August of 2002, a representative of the Clark County Health Department collected a crow in the northeast section of the county. CCHD sent the bird for testing to the Indiana State Department of Health ultimately confirming our first case of West Nile Virus in Clark County. We fully expected to be adding this new public health threat to our Rolodex of public health threats for months. So how did we respond?

The first step was to establish a mosquito surveillance program for the county. We knew we were looking for a particular type of mosquito, primarily the *Culex Pipiens/Restuans*.



Culex sp. Photo by Aarika Evans

Gravid traps were purchased that specifically attract those mosquitoes. Working with Indiana University Southeast we developed a cooperative agreement allowing for the entire IUS Ecology Class to study the extent of West Nile Virus in the county. In the fall of 2002 this team of students worked in both Floyd and Clark Counties finding 3 positive sites in Clark and 5 positive West Nile sites in Floyd. The following year Harrison County joined our program. At that time we had 80 students working throughout the 3 counties providing quality surveillance.

The West Nile Virus has a host cycle that involves birds, horses and humans. The birds form the reservoir or the “pool” of virus in the environment. A mosquito then bites the bird and becomes infected. The mosquito then bites a human or horse (both are dead end host) and the risk of illness becomes very real and consequential for those who become ill.

The most effective way to break this cycle is to eliminate the vector, in this case the mosquito. In 2003 we invested into larviciding equipment and products. We coordinated with larger municipalities and provided them with equipment helping us reduce the risk of human transmission by controlling mosquito populations in their community. This allowed CCHD to stay focused on the county at large.

Today, West Nile is more prevalent with 15 sites testing positive in the county during the 2018 mosquito season. Along with heightened presence of West Nile, we now have a slight, localized risk for the Zika Virus. Larviciding is effective when you can identify every site where mosquitoes are breeding and eliminate or treat that site, however, this is not feasible geographically for Clark County. So we need to add an additional tool to the vector control toolbox.

We have secured funding to purchase an Ultra-Low Volume pesticide applicator that will be truck mounted. This new unit will be electric to keep maintenance cost to a minimum, and will be fitted with a control box ensuring appropriate pesticide application rates. This is the only type of device available today that can reduce adult mosquitoes infected with West Nile or other diseases. When surveillance suggest that adult mosquitoes are positive for disease, the

(continued on page 4)



Gravid Trap Photo by Aarika Evans



only logical solution is to reduce those populations of mosquitoes, lowering human transmission rates. This unit will primarily be used under specific scenarios, mostly by confirmation of West Nile Virus or other disease of public health significance.

This is a tool necessary to give CCHD the technology and the capability to reduce the public health risk to our community, our families, neighbors, and friends.

We hope that everyone enjoys a safe summer, and remember to visit www.clarkhealth.net for tips on mosquito repellents and outdoor safety.



August is that time of year when it can become unbearably HOT. We participate in more water activities and use more water around the home. So, it is a perfect month to highlight the importance of water and emphasize how we can protect it.

Water makes up 70% of our earth and pollution is a major problem around the world. Water pollution can lead to the spread of illnesses and affect our environment and economy. Some examples of how you can help include reducing chemical usage in your home, using drug disposal sites instead of flushing unwanted medications, and picking up trash that would otherwise end up in storm drains and our rivers.



Photo by Alyssa Underwood

Use this month to educate yourself on the importance of clean waterways and how you can do your part. For more information: npca.org/articles/98-focus-on-water-celebrating-national-water-quality-month

drinktap.org/

<https://www.water-pollution.org.uk/>



The CDC has deemed September as a month to educate and raise awareness for the prevention of food poisoning. Each year, the CDC estimates that 1 in 6 Americans get some form of food poisoning from eating contaminated food. See our article in this issue of the newsletter for food safety tips.

For more information: www.cdc.gov/foodsafety/education-month.html



FOOD SAFETY

Foodborne illness – illness carried or transmitted to people by food. Foodborne illness is caused by a variety of bacteria, viruses, parasites, and toxins. The CDC estimates each year 48 million people get sick (1 in 6), 128,000 people are hospitalized, and 3,000 people die in the United States from foodborne illnesses. The USDA Economic Research Service estimates the economic burden of foodborne illness in the United States to be \$15 billion each year.

Ways to increase food safety include 1) cook food to the adequate temperatures, 2) hold potentially hazardous food at the correct temperatures, 3) don't cross contaminate food/equipment, and 4) practice good personal hygiene.

1) Adequate cooking temperatures

- Poultry should be cooked to an internal temperature of 165°F.
- Ground, tenderized, or injected meat and fish should be cooked to an internal temperature of 155°F.
- Whole meat, whole fish, and eggs should be cooked to an internal temperature of 145°F.

2) Proper holding temperatures

- Cold hold potentially hazardous food at 41°F or below.
- Hot hold potentially hazardous food at 135°F or above.
- Cool food from 135°F to 70°F in no more than 2 hours and 70°F to 41° in no more than 4 hours.
- Pathogens grow rapidly between 70°F - 135°F.

3) Prevent cross contamination

- Store potentially hazardous food items apart from each other by type and apart from ready-to-eat food.
- Do not use the same utensils on different uncooked potentially hazardous food types or raw foods then ready-to-eat foods.

4) Practice good personal hygiene

- Wash hands in hot water and soap for 20 seconds and dry.
- Don't make food for others while ill.

Another common occurrence that could cause illness, although quite rare, is when water lines lose pressure and a boil water advisory is issued. The best way to treat the water is to heat it to a rolling boil for one minute. Some cons to boiling water is you have to allow it to cool and it may taste flat. If the taste is bothersome you can pour the boiled water back and forth from one container to another to aerate it and make it taste better.

If boiling water is not an option you may disinfect the water with chlorine. Add 8 drops of chlorine (6%) to 1 gallon of water and wait 30 minutes. Or, add 6 drops of chlorine (8.25%) to 1 gallon of water and wait 30 minutes. Chlorination is not good for turbid water. Boiled or chlorinated water should be used for things such as drinking, cooking, ice, dish washing, tooth brushing, etc. during drinking water advisories.



PUBLIC HEALTH

ANIMALS AND AGING

September is Healthy Aging month. We would like to once again, bring up our furry friends. The University of Michigan conducted a survey in 2018 and discovered that 88 percent of 50-80 year old pet owners surveyed stated that their pet helped them enjoy life. Other benefits included having a sense of purpose, feeling loved, being more active, and helping their coping mechanisms.¹

Enders-Slegers and Karin Hediger (2019) discuss how loneliness has been linked to a 26% likelihood increase of death while isolation has a 29% increase; both of which are commonly stated ailments of older adults. Pets can reduce loneliness, isolation, and feelings of depression, leading to more healthy aging.²

Of course, we want to ensure that older adults are equipped to handle the challenges of having a pet, but once those challenges are overcome, having a pet in the household may be the benefit older adults are looking for.

For more information, go to:
<http://www.petsfortheelderly.org/>

<https://www.facebook.com/SeniorPetsForSeniorPeople/>

LEAD POISONING

Lead poisoning is a silent public health crisis in the united states. Millions of homes across the U.S. contain lead levels high enough to poison children and over 500,000 children currently have elevated blood lead levels.³ Many children probably go undiagnosed due to lack of testing and knowledge about the dangers of lead in a home.



“ONE SMALL CAT CHANGES COMING HOME TO AN EMPTY HOUSE TO COMING HOME.”—PAM BROWN

Often, there are no symptoms of lead poisoning in a child until levels become high enough to cause irritability, disruptive behaviors, and fatigue, all of which can lead to the permanent lowering of IQ of an individual without treatment.

Although it can happen from numerous sources, the most common way for children to become lead poisoned is from household paint. Lead was a component in paint until it was banned by the EPA in 1978. Homes built prior to this date have the greatest potential to cause elevated lead levels in children. Paint that is chipping, peeling, or otherwise deteriorated can cause dust to enter the child's bloodstream through ingestion or inhalation.

The only way to know if your child is affected is by getting a blood test. This starts as simple as a pin prick of the finger.

Testing is a requirement at ages one and two for children on Medicaid. Testing can be done at your primary care physician's office or our Health Department Clinic.

For more information:

<https://www.in.gov/isdh/26550.htm>



 Paint in Homes Built Before 1978	 Lead Contaminated Soil	 Lead Contaminated Dust	 Traditional Remedies & Cosmetics
 Imported Pottery	 Imported Toys	 Imported Jewelry	 Imported Candy

1. Janevic, M., Solway, E., Malani, P., Kirch, M., Kullgren, J., & Connell, C. (2019). National Poll on Healthy Aging: How Pets Contribute to Healthy Aging.

2. Enders-Slegers, M. J., & Hediger, K. (2019). Pet ownership and human-animal interaction in an aging population: Rewards and challenges. *Anthrozoös*, 32(2), 255-265.

3. <https://www.cdc.gov/nceh/lead/default.htm>



HEALTH OFFICER'S PERSPECTIVE

BY DR. ERIC YAZEL,
CLARK COUNTY
HEALTH OFFICER



One of the greatest public health accomplishments of our century has been the elimination of measles as a major illness. Now, as "hot spots" continue to pop up across the country, the return of measles has to be considered one of our biggest public health failures. At the time of writing this, there have been nearly 1000 cases in the United States, including Indiana.

One of our main philosophies of public health are preparedness and prevention. So let's cover some basics of measles. It is a viral illness that lives in the nose and throat of an infected person. It is transmitted by coughing and sneezing, and can live up to two hours in an airspace where the infected person has been. It is very infectious, where 90% of people who are not immune will become infected when contacting it. The symptoms of measles are easiest remembered as the three C's-cough, conjunctivitis, and coryza (runny nose). Two to three days after symptoms begin, tiny white spots may appear inside the mouth called Koplik spots. Three to five days after symptoms begin, a rash breaks out, typically flat red spots that start at the hairline and spread downward to the neck, trunk, arms, legs, and feet. Measles can be difficult to diagnose because those initial symptoms are very similar to numerous others that we encounter day in, day out. The Koplik spots are a great clue once present. A person is considered infectious from four days before the rash appears to four days after. The incubation period is usually 10-12 days before a person is symptomatic.

As a viral illness, measles has no specific treatment, aside from treating the symptoms. The best treatment is prevention, as in proper hygiene and vaccination. The current vaccination recommendations are: You should consider yourself protected if you can show one of the following:

- 1) You have had two doses of measles containing vaccine
- 2) You received one dose and are a preschool aged child or an adult who will not be in a high risk setting for transmission
- 3) A lab test has confirmed you have had measles at some point in your life, or are immune to measles
- 4) You were born before 1957

If you are unsure of your vaccination status, there are two options. You can be tested for immunity, or simply get another vaccination. There is no harm in getting another dose of MMR vaccine if you are already immune.

Hopefully, we don't see a return in cases locally. However, with the number of cases we are seeing nationwide, now is a good time to check your status and make sure you are protected. The higher the percentage of our population that gets immunized, the more likely Clark County remains measles free!



Let's **STOP** Measles
together!

from CDC website

Measles Can Be Serious

 <p>About 1 out of 4 people who get measles will be hospitalized.</p>	 <p>1 out of every 1,000 people with measles will develop brain swelling due to infection (encephalitis), which may lead to brain damage.</p>	 <p>1 or 2 out of 1,000 people with measles will die, even with the best care.</p>
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MENTAL HEALTH: BRAINGAMES

WORD SEARCH

G U A	P M W
D I E W N G	B L Y P Z Q
V X F E A H K Z S	J R Z A R P W D C
V F T G P L V L J	I E M E C A D J X
K G S A B U N P G X	I X F C T T V K H U
M H V W Z V Y Y B F	T E I H P W P Y U L
A U B E I I C D Z G U	X I P U F T O F A Z I
E V S W M U B W E T N C I	B Q F L H N L O S
T X U A S H T G O C T N L A L E X C X U	
T Z C C P I T A O Y O U D G X	
F T R T I D Y T G	
W C A E I T P W I R D Y W	
B V G T C A S N O O L O K F F	
R L E I A N V J K N U J U P D E B Q W	
J U B R W F R U Q V N X X O T I K I A W D	
S D R M P E N W I D J S R H O S I L H F R	
Z X I R Q S X P Y W S A N I T A T I O N A A W	
Y M O O N O P A A S R J M D V I N J L I R	
N T C O A P I T V R Z Y O F N L E J F N I	
S E C W A D E D D D V A L O F A S A T	
B E L Q O R V A V E S P R Z A G U	
V N C W D L G I U Q T U E	
N G R O I A U K Y	
Y P U	
R U D	

GROUNDWATER
POLLUTION
SEWAGE
STORMWATER
AQUIFER
SANITATION
CONSERVATION
PRECIPITATION
IRRIGATION
DRAINAGE

BRAINTEASER

I am a protector.
I sit on a bridge.
One person can see right through me, while others wonder
what I hide.
What am I?



Answer: *Sunglasses.*
(they sit on the bridge of your nose)

SCIENCE SPOTLIGHT

Drink and sleep like a fish: goldfish as a behavior model to study pharmaceutical effects in freshwater ecosystems

It has been well documented that pharmaceuticals are entering our waterways and have become a newer source of pollution. Aliko et al. (2019) tested whether the presence of such pollutants could have an effect on aquatic organism behavior.

Using goldfish, *Carassius auratus*, researchers tested for behavioral changes in response to ethanol (0.25 and 1%), caffeine (50mg/L), and fluoxetine (100 µg/L)-an ingredient in Prozac. Using video recording equipment, they discovered that in all treatments, animals showed slower detection of foods, and an increase in food gulping, possibly a response to increased stress levels. Additionally, each potential pollutant had different effects on swimming behavior. Behavioral changes included spending a majority of time at the bottom of the tank with increased erratic movements and decreased exploring (caffeine), or increased use of the top of the water while in vertical positions (fluoxetine). Fish treated with ethanol and caffeine had increased breathing and opercular activity.

The researchers further elaborate on possible reasons these changes occur. Such changes may lead to the inability to find food, or increase susceptibility to predators. It may be possible to use changing behaviors as an early indicator of water pollution.

The presence of pharmaceuticals is a growing problem and we have evidence to suggest that it can affect aquatic organisms. Further research is needed in this area as potential consequences may impact our food stocks from fisheries and oceans, decrease biodiversity, as well as influence local economies.

One small thing you can do is do not flush medications down the toilet-they cannot be removed by wastewater treatment and all end up in our waters. Clean water starts with you!

Aliko, V., Mehmeti, E., Qirjo, M., & Faggio, C. (2019). " Drink and sleep like a fish": goldfish as a behavior model to study pharmaceutical effects in freshwater ecosystems. *Journal of Biological Research-Bollettino della Società Italiana di Biologia Sperimentale*, 92(1).

JULY 5TH

Riverstage is already up and running! Concerts are on Friday nights, free, and begin at 7 pm in Jeffersonville. For more information and schedule:

<https://jeffparks.org/the-riverstage/>

JULY 12-20

Join us at the Clark County Fairgrounds in Charlestown for the annual 4H Fair. Too many events and activities to list! For more information follow the 4H Facebook page:

www.facebook.com/PurdueExtensionClarkCounty4H/

AUGUST 24

[Back Your Blue 5K to benefit the Officers of the Jeffersonville Police Dept. Big Four Park. Registration 7:30 am. For more information:](http://getmeregistered.com/BackYourBlue5K)

<http://getmeregistered.com/BackYourBlue5K>

AUGUST 30, 31

Jeffersonville will host its annual Steamboat Nights. Live music, movie, balloon glimmer, and many other events and activities will be happening at Pearl and Chestnut Streets. 6:30- 10:30 PM. For more information follow the event facebook page:

<https://www.facebook.com/steamboatnights/>

Administration/Vital Records/Environmental

1320 Duncan Avenue Jeffersonville, IN 47130

Phone 812-282-7521

Office Hours

Monday 8:30am - 4:30pm

Tuesday 8:30am - 4:30pm

Wednesday 8:30am - 4:30pm

Thursday 8:30am - 4:30pm

Friday 8:30am - 4:30pm

Saturday - CLOSED

Sunday - CLOSED

Baby and Me, Tobacco Free - Phone 812-283-2746

Public Health Nurse

1301 Akers Avenue Jeffersonville, IN 47130

Phone 812-283-2459

HIV/STD Program Office - Phone 812-288-2706

Public Health
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Clark County Health Department

