

# MOSQUITO & VECTOR CONTROL DIVISION

## ✓ DIVISION OVERVIEW:

Harris County Public Health's (HCPH) Mosquito and Vector Control Division (MVCD) protects the health and well-being of Harris County community members through the prevention and targeted control of vector-borne diseases. MVCD monitors vector-borne diseases for the entire region of Harris County, this includes both incorporated and unincorporated areas. This is accomplished through an Integrated Pest Management (IPM) Program that includes surveillance, education, prevention, detection, intervention, evaluation, and the utilization of technology to impact vectors of public health significance.

## ✓ MOSQUITO CONTROL SERVICES:

MVCD actively conducts surveys, for potential breeding habitats of mosquitoes, to impact the spread of vector-borne diseases through inspections and application of larvicide. Community members experiencing high mosquito activity in their neighborhood are welcome to email ([mosquito.vector@phs.hctx.net](mailto:mosquito.vector@phs.hctx.net)), call the office (713-440-4800), or fill out a request online for an inspection. Community members may also access MVCD via the Harris County 311 public-facing portal to make a request for service. An inspector may contact the community member, if requested, to schedule an inspection of the property for potential mosquito breeding sites. If the inspector identifies any active or potential breeding sites, they will address the area of concern and apply larvicide where applicable as well as providing future recommendations to the community member.

## ✓ DISEASE SURVEILLANCE:

MVCD sets and retrieves mosquito traps each week across 268 operational areas encompassing the county. Trained entomologists identify mosquitoes of public health significance for arboviruses (viruses spread by arthropods a.k.a. insects) and perform testing from these collections. Mosquito samples are sorted into pools of up to 50 mosquitoes of the same species and sex. The pools of mosquitoes are then sent to the MVCD laboratory for pathogen testing.

MVCD virologists perform testing on mosquito pools to detect the presence of West Nile Virus (WNV), St. Louis Encephalitis virus (SLEV), Dengue virus (DENV), Chikungunya virus (CHIKV), Zika virus (ZIKV), and Eastern Equine Encephalitis virus (EEEV), and obtains results within 12 hours. The Virology laboratory also confirms any positive dead bird samples tested by MVCD's Avian Surveillance. Non-mosquito vector surveillance is another important part of MVCD's disease surveillance programs. Routine tick surveillance activities are conducted in areas considered favorable habitats for host-seeking ticks. Using both active and passive tick trapping practices, the specimens are collected and then processed. Through genetic sequencing, MVCD can screen for tick-borne pathogens.

Avian surveillance is a vital section that is also active year-round by setting nets to collect blood from birds. This sampling is a key surveillance activity, as birds are common reservoirs for pathogens of public health significance including WNV and SLEV. Mosquitoes feed on birds and potentially infect them with arboviruses that can later impact humans or other animals. Through this active surveillance we can detect diseased birds and proactively treat vectors in those operational areas.

## ✓ DISEASE CONTROL MEASURES:

MVCD only sprays when disease is identified in the community from surveillance samples. These activities are conducted at night. Several trucks with integrated ultra-low volume (ULV) spray equipment with active real-time tracking are deployed to treat a designated area. ULV trucks have sophisticated technology to assist with tracking and control measures to ensure all MVCD spray operations are compliant with state and federal regulations. This technology supports post-treatment evaluation by supervisors to ensure all applicable areas are treated when disease is identified in the community. Community members can visit the MVCD website, which contains multiple maps indicating where confirmed disease samples were collected and where treatment events occur. All vector-borne diseases identified and treated by MVCD are reported to the Texas Department of State Health Services (DSHS) for data collection.

## ✓ DEAD BIRD REPORTING:

Harris County community members are encouraged to report any dead birds found on their property or public areas. This can be done by completing the Dead Bird reporting form, calling the Dead Bird Hotline at (713) 440-3036 or visiting the MVCD website. Members may also access our 311 public facing portal. Reports allow for trained avian specialists to go to the property and conduct animal collections of dead birds meeting testing criteria, which includes no signs of trauma, no ants or maggots, and deceased for less than 24 hours. MVCD will test these dead birds for pathogens in our laboratory and report to DSHS when diseases are identified. Through reporting and allowing trained surveillances staff to respond, the risk of exposure to any pathogens is reduced for community members.

## ✓ APPLIED & ALTERNATIVE RESEARCH:

MVCD has a dedicated research section that employs novel methods and alternative approaches to control mosquitoes. MVCD is leading research by using the sterile insect technique (SIT) to impact the primary vector for WNV, the Culex mosquito. Another collaboration exists with Microsoft and the National Science Foundation (NSF) to evaluate/use a new trapping system that is innovative in its ability to identify insect species. The Microsoft Premonition Project has the potential to predict biological threats and alert public health entities before disease-associated events occur. This novel AI-powered Biological Weather Station (BWS) aims to increase the network for surveillance and support faster response to vector-borne disease. This research section is active in seeking collaborations and research opportunities that will benefit the residents of Harris County. MVCD is continually testing to evaluate mosquitoes from the community for insecticide resistance via field, laboratory, and molecular techniques.

## ✓ EDUCATION & OUTREACH TEAM:

MVCD is dedicated to informing the public and educating community members about our mission, vision, activities, and resources. This team develops and provides educational resources to help community members protect themselves from vector-borne diseases. MVCD works with school districts, universities, museums, libraries, civic associations, and community groups across Harris County. Community members may request a speaker or tabling event from MVCD via phone, email or website. We also serve the community of licensed pesticide applicators in Harris County, by hosting an annual event for professionals to attain mandatory continuing education units (CEUs). This annual meeting is held on the 1st Thursday of May in Harris County.



### CONTACT US:

Scan the QR code or call (713) 440-4800 for more information.



# Harris County Public Health

## Mosquito and Vector Control Division (MVCD)

### Did You Know?

- ✓ MVCD serves all incorporated and unincorporated areas of Harris County. MVCD only performs mosquito spraying in areas where disease has been detected by year-round surveillance and testing.
- ✓ MVCD is accepting new suggestions for surveillance locations. If you are interested in letting us collect your vectors, request an application. Contact [mosquito.vector@phs.hctx.net](mailto:mosquito.vector@phs.hctx.net)
- ✓ MVCD accepts resident requests to evaluate mosquito breeding habitats impacting residents. Contact 713-440-4800
- ✓ MVCD accepts ticks, fleas, kissing bugs, no-see-ums, sandflies and more for disease testing from the public. Contact 713-440-4800
- ✓ MVCD accepts reports of dead birds for collection and testing for diseases from the public.  
Dead bird hotline: 713-440-3036
- ✓ MVCD offers educational presentations about our operations and resources on how to prevent vector-borne illnesses for a variety of audiences. Contact [mosquito.vector@phs.hctx.net](mailto:mosquito.vector@phs.hctx.net)
- ✓ MVCD offers tours of our facility to support education on scope of operations and collaborations to prevent vector-borne disease. Contact [mosquito.vector@phs.hctx.net](mailto:mosquito.vector@phs.hctx.net)
- ✓ MVCD shares live maps of both disease detection and treatment areas. <http://HCPHTX.ORG/MC>
- ✗ MVCD does not perform mosquito spraying in response to demand or nuisance mosquitoes.
- ✗ MVCD does not spray inside apartment complexes, public parks, gated communities, and commercial properties.



Harris County  
**Public Health**  
MOSQUITO & VECTOR  
CONTROL DIVISION

# Prevent the



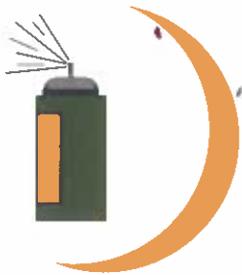
# Bite!

## Day & Night

**BBQs, gardening,  
swimming pools and  
hikes...and mosquitoes!**

Enjoy the outdoors, but remember to protect yourself, your family, and your pets from mosquito-borne diseases. Your best defense against being bitten is simply to be prepared. Help "Prevent the Bite."

1.



When outdoors, prevent mosquito bites by using an EPA-registered insect repellent that contains one of the following: DEET, picaridin, IR3535, oil of lemon eucalyptus/PMD, or 2-undecanone. Follow product instructions.

2.



When weather permits, wear long sleeves, long pants, and socks. For infants, place mosquito netting over infant carriers, cribs, and strollers.

3.



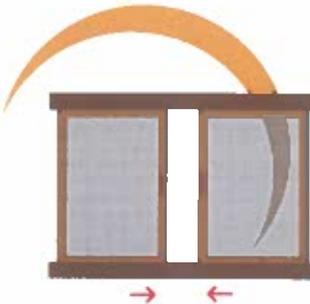
Don't feed the storm drain. Sweep lawn clippings, leaves and tree limbs from sidewalks and driveways.

4.



Once a week, empty, turn over, cover, or throw out items that hold water, such as tires, buckets, planters, toys, pools, birdbaths, flowerpots, or trash containers. Check inside and outside your home.

5.



Install or repair screens on windows and doors to keep mosquitoes outside. Use your air conditioning, if possible.

6.



Household pets can be exposed to West Nile virus (WNV). Contact your veterinarian for more information.



Harris County  
**Public Health**  
 Building a Healthy Community



# REPEL Mosquitoes!

Choosing the right repellent for you

- EPA-registered insect repellents are proven safe and effective, even for pregnant and breastfeeding women.
- **DO NOT** use repellent on babies younger than 2 months of age.
- If you are also using sunscreen, apply **sunscreen FIRST**, then apply **insect repellent**.
- Use an Environmental Protection Agency (EPA)-registered **insect repellent** that contains one of the following **active ingredients**.

|  |   |   |
|--|---|---|
| <b>Active Ingredients</b><br><br>ALWAYS use repellent according to the product label | DEET  | Find the insect repellent that's right for you by using EPA's search tool:<br><br><a href="http://bit.ly/EPAREpellent">http://bit.ly/EPAREpellent</a> |
|  | IR3535  |   |
|  | Picaridin   |   |
|  | Oil of lemon eucalyptus (OLE) or para-menthane-diol (PMD) |   |
|  | 2-undecanone  |   |

(NOT FOR USE ON CHILDREN UNDER 3 YEARS OF AGE)