

County Resources to Help You

Free Tick Identification Service

To learn the species, tick development age, gender and engorgement level, bring a dead or living tick sealed in zippered plastic bag or container, in person to the Monmouth County Mosquito Control Division at 1901 Wayside Rd. Tinton Falls, NJ 07724. This data can be used to help inform you and your physician what illness a bitten individual may potentially develop.

Request a Courtesy Mosquito Inspection

A County inspector can visit your property to look for standing water sources that support mosquito larvae. If larvae are found, the inspector will either treat the water to kill the larvae or drain containers like buckets.

Visit the [Monmouth County Mosquito Control Division website](#) for more information and resources on how to manage ticks and mosquitoes to prevent disease.

Sources for Further Information

¹ [Tick-Borne Diseases in New Jersey—Monmouth County Mosquito Control Division](#)

<https://co.monmouth.nj.us/page.aspx?ID=2858>

² [Tick Habitats](#)

http://twp.freehold.nj.us/ticks/public/risk_assessment/tick_habitats.html#

³ [Tick Identification—Monmouth County Mosquito Control Division](#)

<https://co.monmouth.nj.us/page.aspx?ID=2859#TickOtherDisease>

⁴ [Mosquito Biology—Monmouth County Mosquito Control Division](#)

<https://co.monmouth.nj.us/page.aspx?ID=4688>

⁵ [Larval Habitats of Mosquitoes](#)

<http://vectorbio.rutgers.edu/outreach/habitat.php>

⁶ [West Nile Virus \(WNV\)](#)

<https://co.monmouth.nj.us/page.aspx?ID=2869>

⁷ [Eastern Equine Encephalitis \(EEE\)](#)

<https://co.monmouth.nj.us/page.aspx?ID=2867>

⁸ [Saint Louis Encephalitis-Frequently Asked Questions](#)

<https://www.cdc.gov/sle/general/qa.html>

⁹ [Heartworm in Dogs](#)

<https://www.heartwormsociety.org/heartworms-in-dogs>

¹⁰ [How Do Mosquitos Transmit Infectious Diseases?](#)

<http://www.aappublications.org/content/34/6/17>

¹¹ [Tick Removal](#)

https://www.cdc.gov/ticks/removing_a_tick.html

Monmouth County Board of Chosen Freeholders

Thomas A. Arnone, Director
Patrick Impreveduto, Deputy Director
Lillian G. Burry
Gerry P. Scharfenberger, Ph.D.
Susan M. Kiley

Monmouth County Planning Board

James Giannell, Chair
Paul Kiernan Jr., Vice-Chair
Charles Casagrande
Jennifer DiLorenzo
Nancy Grbelja
Marcy McMullen
Lillian G. Burry, Freeholder Representative
Gerry P. Scharfenberger, Ph.D., Freeholder Representative
Joseph Ettore, County Engineer

Alternates

James C. Schatzle
John A. Mele
Patrick Impreveduto, Deputy Director, Freeholder Alternate
Ming Y. Kao, Alternate to County Engineer

Environmental Council

Wilma Morrissey, Chair
France Karras, Vice-Chair
Jennifer DiLorenzo
Barbara Horl
Paul Johnson
David Kostka
Scott Thompson
John Vig
Ebru Altinsoy

Executive Staff

Edward Sampson, PP AICP, Director of Planning
Joe Barris, PP AICP, CFM, Assistant Director of Planning
JoAnn Denton, Secretary to the Planning Board
Mark R. Aikins, Esq., Counsel to the Board

Contributing Staff

Amber Mallm, Environmental Specialist
Linda Brennen, Supervising Planner, PP AICP
Victoria Thompson, Mosquito Control Division Superintendent

April 2019

MONMOUTH COUNTY PLANNING BOARD



ECO-TIPS:

Dealing with Ticks and Mosquitoes



Ticks and mosquitoes disrupt our enjoyment of the outdoors with their creepy crawly bodies and itchy bites, but they can also threaten our long term health. Ticks and mosquitoes spread a variety of diseases, from debilitating to life threatening. Learning about how these pests live and the threats they pose will help you understand how to protect your family and pets.

Which Ticks Are in Monmouth County?

The three most common tick species in the County are the black-legged or “deer tick,” the lone star, and the American dog tick.¹

Deer ticks prefer to live in cool moist conditions and are commonly found in dense shrubs and piles of fallen leaves. Often they are encountered at forest edges.

Lone star ticks can tolerate a drier habitat than deer ticks. They are often found in shrubs, fallen leaves, and at forest edges.

Immature American dog ticks are commonly in old-fields, along trails and in pastures.

Adult American dog ticks are likely to inhabit overgrown areas in urbanized settings like vacant lots.²

Tick Borne Diseases & Their Symptoms

While Lyme disease is the most common vector-borne illness in Monmouth County, it is only carried by black-legged ticks, otherwise known as deer ticks. Each of the common ticks in Monmouth County are capable of carrying a transmittable disease.³ The table below lists which ticks carry which diseases:

Deer Tick	Lone Star Tick	American Dog Tick
		
<ul style="list-style-type: none"> - Lyme Disease - Anaplasmosis - Babesiosis - Powassan Virus 	<ul style="list-style-type: none"> - Ehrlichiosis - STARI 	<ul style="list-style-type: none"> - Spotted fever group rickettsioses <p>Example: Rocky mountain spotted fever</p>

In general, symptoms of tick-borne illnesses include fever, chills, headache, body aches, fatigue and nausea.³ If you develop any of these symptoms, see a physician immediately, especially if you recently removed a latched tick.

Mosquitoes and Their Habitats

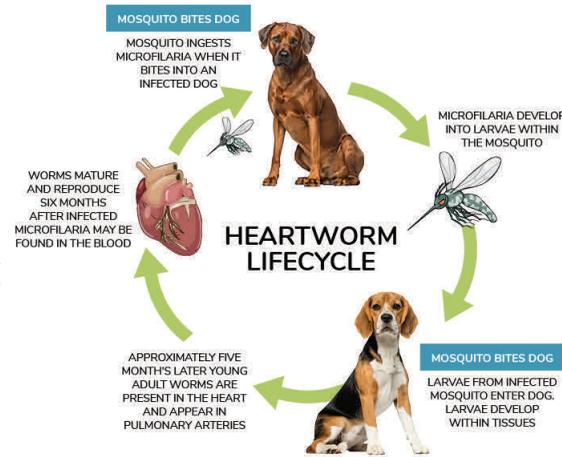
Monmouth County is home to more than 40 mosquito species.⁴ Each species requires water for its lifecycle. Females will lay eggs in a variety of water sources including saltwater and freshwater wetlands, temporary woodland pools, roadside ditches and puddles, freshwater ponds, containers and tree holes. Only a few mosquito species in NJ breed in running water habitats like streams.⁵

Mosquito Borne Diseases & Their Symptoms

Mosquitoes are responsible for many vector borne diseases worldwide, most notably malaria and yellow fever. In New Jersey, West Nile virus and Eastern Equine Encephalitis are the most likely diseases to be transmitted by local mosquitoes. **West Nile virus (WNV)** symptoms include fever, rash and headache. In severe cases, WNV may lead to meningitis, encephalitis, coma and possibly death. The fatality rate is about 10%, usually affecting people with weakened immune systems. Even in less severe cases, West Nile virus can leave a person with lifelong neurological and other systemic consequences.⁶ **Eastern Equine Encephalitis** is

a rare but serious disease with a much higher fatality rate. Symptoms include a sudden onset of high fever, vomiting, convulsions and drowsiness.⁷ **St. Louis Encephalitis** is another mosquito-borne disease that can occur in New Jersey; however, the last case was reported in 1975. Other pathogens like Zika virus, Chikungunya virus and Dengue fever can technically be carried by mosquito species found in New Jersey; however, there is no evidence any of these viruses are circulating in local mosquitoes.⁸

While pets can contract many of the same vector borne diseases as humans, pets are also susceptible to **heartworms**, a potentially fatal disease spread by mosquitoes. Symptoms include cough, lethargy, fatigue, loss of appetite, and weight loss.⁹



Source: Dogs Naturally Magazine

How do ticks and mosquitoes spread disease?

Both adult female ticks and mosquitoes bite animals to obtain protein-rich blood to develop eggs. In addition, ticks need protein to grow into each life stage- larva to nymph to adult. When a tick or mosquito feeds on an animal that carries a pathogen (a disease-causing virus, bacteria or parasite), the tick or mosquito may ingest the pathogen. If the pathogen thrives in a tick or mosquito and circulates into its salivary glands, it can inject the pathogen into its next victim. Not all pathogens survive in all ticks or mosquitoes; thus certain diseases are transmitted by certain ticks or mosquitoes.¹⁰

Preventing Infection

The most effective way to prevent contracting a disease spread by ticks and mosquitoes is to avoid being bitten:

- ◆ Avoid tick habitat –brush, tall grass, woodland edges
- ◆ When in tick habitat wear long sleeve shirts tucked into long pants, with pants tucked into socks

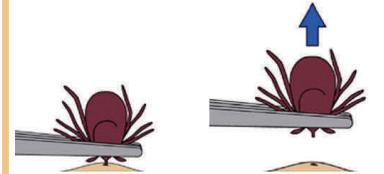
- ◆ Perform a “tick check” on yourself, children and pets
- ◆ Take a hot shower after being outdoors to wash off unattached ticks
- ◆ Reduce mosquito habitat by removing standing water in your yard
- ◆ Limit time outdoors during peak mosquito activity— during dawn and dusk
- ◆ Apply insect repellent appropriate for clothing or skin
- ◆ Treat yards with environmentally safe repellents
- ◆ Talk to your veterinarian to select tick, mosquito, flea and heartworm prevention methods for your pets

How to remove ticks from humans and pets :

1. Use tweezers to grasp the tick as close to the skin as possible
2. Pull upwards with a slow and steady force
3. Clean the bitten area with soap & water or rubbing alcohol

DO NOT use petroleum jelly or fire to remove ticks. These methods are ineffective and dangerous.¹¹

Removing ticks as soon as possible greatly reduces the chance of contracting an illness. In most cases a tick must be attached for at least 24 hours to transmit a disease.



Source: Centers for Disease Control and Prevention

How Monmouth County Controls Mosquitoes

The Monmouth County Mosquito Control Division focusses its efforts on controlling mosquito larvae before they emerge as flying, biting adults. Their program includes applying environmentally sound pesticides to stagnant water habitats aerially by helicopter or on foot using handheld equipment. This Division also uses fish as natural predators of larvae as well as draining or removing container habitats like tires. When there is evidence of elevated risk of West Nile virus or other mosquito borne disease, the Division will conduct communitywide spraying to kill adult flying mosquitoes in residential neighborhoods using truck-mounted equipment. The Division provides notice of these events with a treatment area map and schedule posted on its website. Mosquito control is everyone’s business; do your part to keep your property free of stagnant water- dump or drain!