Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

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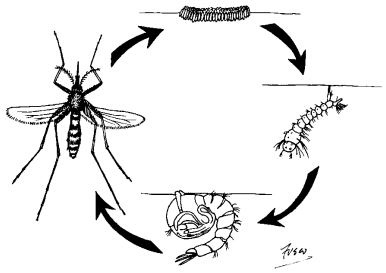
Proper Storage of Discarded Tires to Prevent Mosquitoes

Discarded tires are not only unsightly, but can be unhealthy when they provide ample habitat for mosquitoes and other pests. Of the nearly 3,000 species of mosquitoes worldwide, 176 species are known to occur in the United States. Currently, Connecticut has 52 mosquito species; two of these are exotic (non-native) mosquitoes that were probably imported into the U.S. in shipments of used tires.



Mosquitoes have a life cycle known as "complete metamorphosis." That is, they have a distinct egg, larvae, pupae, and adult stage. They can be broadly categorized into two groups: those which lay clusters of "egg rafts" that float on a stagnant water surface and those which lay individual eggs on a moist surface, such as mud, leaf litter, or the inside of a tree hole or used tire casing. When the eggs of these "floodwater" mosquitoes are flooded by melting snow or heavy rain, they hatch and grow through their aquatic larval and pupal stages before emerging as adults. This process can take as little as 7-10 days during summer. Mosquitoes can be found in almost any natural and artificial still-water environment. Tire casings readily mimic natural tree cavities, providing an effective incubator for mosquito larvae, free from predators.

Asian tiger mosquito (*Aedes albopictus*)
Photo credit: Connecticut Agricultural Experiment Station

Several mosquito species can be found in tree holes and artificial cavities, such as discarded tires. Among these are the Asian bush mosquito (*Ochlerotatus japonicus*) and the Asian tiger mosquito (*Aedes albopictus*), which are native to Japan, Korea, and parts of Asia. Suspected of having been imported into the U.S. in shipments of tires, they quickly expanded their range through the used tire trade. These species are aggressive mammal-biters and have been shown to displace native mosquito species from their natural habitats, including rock pools, tree holes, and artificial containers such as scrap tires. The Asian tiger mosquito is an effective vector of West Nile virus, malaria, dengue, and, more recently, Chikungunya virus, another debilitating mosquito-borne disease. Since 2013, several cases of Chikungunya have been documented in Connecticut from travelers returning from the Caribbean, demonstrating how quickly and easily certain vector-borne diseases can be spread.

Photo credit: Roger Wolfe, CT DEEP Wildlife Division

In 1999, and again in 2005, a survey was conducted of abandoned tire piles and tire facilities around Connecticut to document the presence and extent of the Asian bush and Asian tiger mosquitoes. A number of scrap yards, abandoned tire piles, and collection facilities were found to be producing mosquitoes. Often, the facilities piled uncovered used tires for a period of time before shipping them to other locations, demonstrating how frequently and easily scrap tires (and the mosquito eggs they may be harboring) can be moved from place to place.

Your town or facility may be asked to collect and hold scrap tires until they can be disposed of properly. Facilities often store uncovered used tires in a stack or heap before a hauler can remove them. If left uncovered, rainwater can easily get in and cause mosquito eggs to hatch.

Scrap tires should be disposed of promptly and properly. If your facility collects and holds tires, they should be stored under cover (roof, awning, trailer, storage container) or stacked and covered with plywood or other flat cover to prevent rainwater from entering.

Although not readily apparent, discarded tires play a role in public health as a source of mosquitoes, and their importation and interstate movement can have significant impacts on the health, ecology, and economy of our state and country.

Questions can be directed to:
Connecticut Department of Energy and Environmental Protection
Bureau of Natural Resources, Wildlife Division
Wetland Habitat and Mosquito Management (WHAMM) Program
391 Route 32
North Franklin, CT 06254
860-642-7630

More information about mosquitoes and their control:

Connecticut Mosquito Management Program: www.ct.gov/mosquito
American Mosquito Control Association: www.mosquito.org
Northeastern Mosquito Control Association: www.nmca.org
National Centers for Disease Control and Prevention: www.cdc.gov

The Connecticut Mosquito Management Program (MMP) is a multi-agency collaboration of the Connecticut Department of Energy and Environmental Protection, Connecticut Agricultural Experiment Station, Department of Public Health, Department of Agriculture, and the University of Connecticut. The MMP is founded on surveillance and testing of mosquito populations, monitoring of human disease cases, educating the public on source reduction and personal protective measures against mosquito bites, focused water management and wetland rehabilitation, and the judicious use of registered mosquito pesticides. The Connecticut General Statutes (Sec. 22a-45b and 19a-213) allow for the elimination or prevention of mosquitoes and natural or man-made mosquito-breeding habitats as is necessary to abate a threat of disease to humans or animals from insect vectors.

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