



Fact Sheet: West Nile Virus, Wetlands & Stormwater Ponds

Why does Washtenaw County have stormwater ponds?

Stormwater ponds are commonly used throughout the United States and the rest of the world. When land is developed to create homes and other improvements, the natural system of trees and dense vegetation over spongy soil is replaced with hard surfaces and lawns over compacted soil. Consequently, less rainwater is soaked up and more of it runs off at a faster rate. In addition, there are more pollutants in the rainwater runoff in developed areas due to human activities such as vehicle use and lawn care. Stormwater ponds detain and slow the rate of runoff from developed areas and remove pollutants that are collected in the runoff. In doing so, the ponds reduce flooding, erosion, landslides, and pollution, all of which are essential to protecting public and private property, public health and safety, and water quality.

Why not drain wetlands near homes?

Healthy wetlands provide a minimal habitat for mosquitoes because of water conditions, water quality, and natural predators. Predators including other aquatic insects, amphibians, bats and birds feed on any mosquitoes present. In addition, wetlands are a critical element in a healthy ecosystem that benefits people, water quality and wildlife. Wetlands clean and slowly release rainwater and provide flood protection and wildlife habitat. Many wetlands recharge groundwater critical for local drinking water supplies and prevent streams from drying up during the summer. Many mosquito species need only a small puddle or depression to breed. We will not eliminate mosquitoes by draining wetlands. We could actually increase the mosquito population if their natural predators are destroyed by draining a wetland.

Why can't we put goldfish or other fish in ponds, wetlands and creeks to kill the mosquito larvae?

Natural wetlands and creeks do have native fish, amphibians (i.e. frogs, toads, newts and salamanders) and other aquatic invertebrates that eat mosquitoes and their larvae. In addition, it is illegal to deliberately introduce a non-native species into local waters without a permit from the Michigan Department of Natural Resources. Non-native species often create additional problems. They can proliferate and force out native, beneficial species of fish and other wildlife, and they often carry exotic diseases that kill and harm native species. Also, many ponds and wetlands dry out during the summer and any fish introduced would not survive.

What pesticides are going to be used in Washtenaw County?

The County recommends using products containing the naturally occurring bacteria *Bacillus thuringiensis israelensis* (Bti) or *Bacillus sphaericus*. These bacteria only target mosquito larvae, and have been shown to be non-toxic to humans and other species. These bacterial larvicides are typically placed in retention ponds and storm drains. They are effective at reducing the number of biting adult mosquitoes.

How can I protect my family from West Nile Virus?

We will never be able to eliminate all habitats for mosquitoes, and not all mosquitoes are carriers of West Nile Virus. The best personal protection is to eliminate places where water can stagnate in containers such as buckets, flowerpots and tires. Change water regularly in birdbaths and outdoor pet dishes, clean clogged rain gutters, and put mosquito screens on rain barrels. In addition, make sure the window screens on your home are intact. Wear protective clothing, such as long pants, loose-fitting, long-sleeved shirts, and socks while outdoors near dusk or dawn, or while near tall grass or wooded areas. Consider using an insect repellent containing DEET, picaridin (KBR 3023), or oil of lemon eucalyptus (p-menthane 3,8-diol or PMD), but be sure to follow all label instructions regarding safe use of the product. CAUTION: Do not use repellent on children less than 2 months of age.

**For more information or to report a dead crow, raven or blue jay, call the Washtenaw County West Nile Virus Hotline:
(734) 544-6750**

References: U.S. Environmental Protection Agency <http://www.epa.gov/pesticides/factsheets/larvicides4mosquitos.htm>
Adapted from the September 16, 2002 News Release: *DNRP response to West Nile Virus, Common Question and Answers*.
Department of Natural Resources and Parks, King County, Washington. <http://dnr.metrokc.gov/dnradmin/press/2002/0916wnv.htm>



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