



Ohio Department of Health • Ohio Department of Agriculture • Ohio Department of Natural Resources
The Ohio State University • Ohio Environmental Protection Agency • Association of Ohio Health Commissioners
Ohio Mosquito Control Association • Ohio Environmental Health Association • United States Department of Agriculture

FACT SHEET

West Nile Virus and Wetlands

What Is West Nile Virus?

West Nile Virus (WNV) is a viral disease previously seen only in Africa, Asia, and Southern Europe. This virus can cause encephalitis, an infection of the brain and the spinal cord. For the past 4 years, WNV has caused disease in the United States. In 1999, at least 62 people became seriously ill, and seven of those died. Since then, WNV has rapidly spread throughout 44 states and the District of Columbia. During the year 2000, 21 human cases of WNV encephalitis were reported in the United States, with two deaths, and 56 cases in 2001 with 7 deaths. In 2002, 3737 human cases of WNV encephalitis were reported with 201 fatalities to date. In Ohio in 2002, WNV was reported in all 88 counties, either in birds, mosquitoes, humans or horses. There were 430 human and 644 horse cases identified. It is expected that WNV will continue to be a disease threat in 2003.

The West Nile Virus is spread to people by the bite of an infected mosquito. The principal transmitter of West Nile Virus is the Northern House Mosquito (*Culex pipiens*). Mosquitoes first become exposed to the virus when they feed on birds that are infected with WNV. Once the mosquito is infected, it may transmit the virus to people or other animals when it bites them. Many birds can be infected with WNV, but crows and blue jays are most likely to die from the infection. Horses, too, are prone to severe WNV infection. People cannot get WNV from another person or horse that has the disease.

Continued spread of this disease among wild birds and mosquitoes is anticipated. In Ohio, state, federal, and local agencies are working together to address the potential health risks of WNV to Ohio families and their animals. Public health officials found WNV in crows, blue jays, mosquitoes and horses in 88 Ohio counties

during 2002. Once this was known, mosquito control efforts were increased in those areas to protect people from the disease.

Q. If I'm hiking or walking in an area with wetlands, how can I protect myself from West Nile Virus infection?

West Nile Virus infections usually peak in late summer and early autumn, before mosquito numbers are reduced by hard freezes. If you hike or walk out of doors during this period, you should wear long-sleeved shirts, long pants, and apply insect repellants to clothing and skin, following the label directions, to prevent mosquito bites.

Q. What is the value of a wetland?

Wetlands are among the most biologically productive habitats in the world. Before European settlement, Ohio's wetlands covered 18.9% (5 million acres) of the state. As settlers moved west, they drained the wetlands for timber and farming, thus eliminating 87% of the state's original wetlands. Wetland-dependent wildlife species have been severely impacted by this significant reduction in the amount and quality of wetland habitat. Wetlands are highly productive. They warm quickly in spring and produce abundant quantities of food for amphibians, reptiles, shorebirds, migrating birds, and waterfowl. Even small sites, much less than an acre, can produce hundreds of frogs, toads and salamanders. They also provide critical links to other habitat types and wildlife populations.

Q. Should wetlands be drained to control mosquitoes?

Because the *Culex* mosquito can breed in very small amounts of water, eliminating temporary standing water in plastic containers, discarded tires, or other water-holding containers around

one's property can greatly reduce breeding areas. Any stagnant water in rain barrels, irrigation ditches, clogged gutters, backyard home septic systems, and road-side ditches can serve as breeding sites. The difference between these water-holding places and wetlands is the presence of mosquito-eating predators. Wetlands are home to a host of mosquito-eating beetles, backswimmers, water striders, dragonfly larvae, etc. making them significantly less ideal breeding sites for *Culex* mosquitos.

Q. Can wetlands be drained or are there regulations which protect them?

Wetlands are afforded protection from draining under the authority of the Ohio Environmental Protection Agency in several sections of Ohio Administrative Code 3745. Under this authority, the hydrology necessary to support the biological and physical characteristics naturally present in wetlands shall be protected to prevent significant adverse impacts on the wetlands. A person can not alter the water levels of the wetland which also includes groundwater recharge and discharge.

What Is the Status of WNV in Ohio?

WNV has been confirmed in Ohio since 2002. Infected mosquitoes and birds were found in 88 Ohio counties. Therefore, the virus is present throughout the state. Contact your local health department in your area, or log on to the Web Sites listed here. For the current status on WNV in Ohio and for more information, you can log on to the following web sites:

Ohio Department of Health:
<http://www.odh.state.oh.us/ODHPrograms/ZOODIS/ZooMain1.htm>

Ohio State University:
<http://prevmed.vet.ohio-state.edu/Extension/WestNile/WNV.htm>



For additional information, contact your local health department. You may also contact the Ohio Department of Health's Vector-borne Disease Program at 900 Freeway Drive Columbus, OH 43229 (614) 752-1029 or e-mail us at zoonoses@gw.odh.state.oh.us