



# Fact Sheet

Commonwealth of Pennsylvania • Department of Environmental Protection

## Stormwater Management and West Nile Virus

For more information, visit [www.westnile.state.pa.us](http://www.westnile.state.pa.us) or call 1-877-PA-HEALTH

### What is West Nile virus?

West Nile virus (WNV) is a mosquito-borne disease that can cause encephalitis, a brain inflammation. Infected mosquitoes pass the virus onto birds, animals and people. In 1999 WNV first appeared in New York and then spread into Pennsylvania in 2000. WNV can now be found in all 48 contiguous states. In Pennsylvania, cases of WNV usually occur in the mid-summer or early fall, although mosquito season is usually April-October.

The principal route of human infection with West Nile virus is through the bite of an infected mosquito. Other methods of transmission, which represent a very small percentage of cases; include blood transfusion, organ transplantation, and mother-to-child (ingestion of breast milk and transplacental.)

### Who is most at risk?

According to the Centers for Disease Control and Prevention (CDC), all residents of areas where virus activity has been identified are at risk of getting West Nile virus; persons over 50 years of age have the highest risk of severe disease.

### What are the symptoms?

People with mild infections may experience fever, headaches, body aches, skin rash and swollen lymph glands. People with more severe infections may experience high fever, headaches, neck stiffness, stupor, disorientation, coma, tremors, occasional convulsions, and paralysis. If you have any of these symptoms contact your family physician.

### Is there treatment?

There is no specific treatment for West Nile virus infection. While most people fully recover from the virus, in some severe cases hospitalization may be needed.

### What is Pennsylvania doing to prevent mosquito production?

A multi-agency effort led by the State Departments of Health, Environmental Protection, and Agriculture has created a comprehensive, statewide plan to try to limit the impact of virus outbreak in the Commonwealth.

One of the main objectives of the program is to reduce potential mosquito production across the State. Eliminating places for mosquitoes to live is an important part of an integrated pest management program, and whenever possible is the preferred solution to mosquito control. When source reduction is not possible larval and adult mosquito control is conducted.

### Are stormwater catch basins significant production areas for WNV carrying mosquitoes?

Catch basins can be important production areas for mosquitoes in the genus *Culex* (the primary vector of WNV in Pennsylvania). Many storm drain systems are designed to quickly direct water from impervious surfaces to nearby streams. Sometimes these systems can become clogged with debris, which can lead to standing water and mosquito production. Malfunctioning systems should be reported to local authorities for repair. Older catch basins were designed to trap debris and hold a small portion of the storm water after a rainfall event. These catch basins are a significant source of mosquito production and need to be treated for mosquito larvae on a regular basis. Some counties actively treat catch basins with mosquito larvicides to prevent mosquito production.

### Are residential stormwater retention basins significant production areas for WNV carrying mosquitoes?

Most residential stormwater retention basins are designed to drain in less than four days, which prevents mosquito larvae from completing their development. Mosquitoes need at least four days of

larval development to reach adulthood during the summer. Storm water retention basins that contain water for more than a week following a rain event should be reported to your county West Nile coordinator.

**Are stormwater retention wetlands/ponds significant production areas for WNV carrying mosquitoes?**

Stormwater retention wetlands and ponds may provide appropriate habitat for mosquitoes and mosquito larvae. Mosquito populations are often significantly reduced by the presence of natural predators such as fish and predaceous aquatic insects. When mosquito production is a problem, mosquito larval control should be added to the normal maintenance of debris removal, slope maintenance, removal of invasive vegetation, and sediment removal. Larval control is relatively inexpensive and should be performed from June through October to coincide with the peak of the WNV season in Pennsylvania.

**Remember.....**

The county West Nile coordinator works closely with DEP regional WNV biologists to monitor and control mosquito populations throughout the Commonwealth. Those concerned about WNV are encouraged to visit [www.westnile.state.pa.us](http://www.westnile.state.pa.us) for regular updates on WNV activity within the State. This website also has a list of the county West Nile coordinators who can assist with the monitoring and control of mosquitoes in your area.

**How can I protect myself?**

It is not necessary to limit any outdoor activities, unless local officials advise you otherwise.

However, you can and should try to reduce your risk of being bitten by mosquitoes. In addition to reducing stagnant water in your yard, make sure all windows and doors have screens, and that all screens are in good repair. If West Nile virus is found in your area:

- Take normal steps to prevent insect bites.
- Wear shoes, socks, long pants and a longsleeved shirt when outdoors for long periods of time, or when mosquitoes are most active.
- Consider the use of mosquito repellent, according to directions, when it is necessary to

be outdoors. Wash all treated skin and clothing when returning indoors.

**Remember, electromagnetic devices, ultrasound devices and Vitamin B are not effective in preventing mosquito bites.**

**Where can I get more information?**

Visit the West Nile website at [www.westnile.state.pa.us](http://www.westnile.state.pa.us), or call 1-877-PA-HEALTH (72-432584) or contact DEP at the appropriate regional office below.

DEP Regional Offices

**Southeast Regional Office**  
Water Supply Management – 484-250-5113  
Counties: Bucks, Chester, Delaware, Montgomery, Philadelphia

**Northeast Regional Office**  
Water Supply Management – 610-861-2070  
Counties: Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne, Wyoming

**Southcentral Regional Office**  
Water Supply Management – 717-705-4708  
Counties: Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, York

**Northcentral Regional Office**  
Water Management – 570-327-3417  
Counties: Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, Union

**Southwest Regional Office**  
Water Supply Management – 412-442-4301  
Counties: Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland

**Northwest Regional Office**  
Water Management – 814-332-6942  
Counties: Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango, Warren

For more information, visit DEP's website at [www.state.pa.us](http://www.state.pa.us), Keyword: "DEP West Nile."