



# The Pennsylvania West Nile Virus Control Program

## What happens if mosquitoes infected with WNV are found in my area?

From April to October, trained biologists canvas Pennsylvania sampling stagnant water for mosquito larvae and setting traps to assess the adult mosquito population. Adult mosquitoes are identified and tested for WNV in the DEP and State Health Department labs. If mosquitoes test positive for WNV, the following steps are taken.

**Notification** Immediately after receiving the positive results from the lab, the DEP regional biologists notify the county coordinator and the local health department. The results are also posted to the DEP website at [www.westnile.state.pa.us](http://www.westnile.state.pa.us).

**Pre-Control Surveillance** To determine if the infected mosquito population is localized or widespread, additional traps are set at the original collecting site as well as at a 0.5- to 1.0-mile radius from the original site. Biologists identify and eliminate stagnant water to reduce potential mosquitoes breeding sites.

**Human Health Risk Assessment** The risk to human health determines if control measures are necessary. There are many factors that need to be considered when assessing human health risks.

- **Infection Rate:** Infection Rate (IR) is the estimated number of infected individual mosquitoes per 1,000 mosquitoes tested. IR indicates what proportion of the mosquito population is carrying the virus. The higher the IR, the more likely a human will become infected when bit by a mosquito. For example, an IR of 1 poses much less threat than an IR of 5.
- **Mosquito Characteristics:** The species type and population size of infected mosquitoes can affect the risk of infection to humans. For example, a small population of infected *Culex restuans* is considered low risk; whereas, a large population of infected *Culex pipiens* is considered high risk.
- **Time of Year:** Mosquitoes are active during the warm months, typically April to October; however, the risk of contracting WNV is highest during August and September.
- **Location:** If infected mosquitoes are in a very urban area with a high human population, the human health risk of infection is much higher than in a rural area with a low human population.

**Control** The type of control depends on the level of risk to human health.

Human Health Risk = Low	Human Health Risk = High
<ul style="list-style-type: none"> <li>▪ <b>Larval Control:</b> All stagnant water actively breeding mosquitoes within and surrounding the infected site is treated for larvae.</li> <li>▪ <b>Adult Control:</b> Limited and localized.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Larval Control:</b> All stagnant water actively breeding mosquitoes within and surrounding the infected site is treated for larvae.</li> <li>▪ <b>Adult Control:</b> Barrier and ultra low volume spraying is conducted using a backpack, ATV, truck or aircraft. The equipment type depends on the terrain, treatment area size, and severity of infection.</li> </ul>

*Residents who would like to be notified of all spray events in Pennsylvania are strongly encouraged to register with DEP's News Releases distribution list by visiting: <https://www.ahs2.dep.state.pa.us/WestNileNews/default.aspx>*

**Post-Control Surveillance** Following control treatments, traps are set to determine how successful the treatment was in reducing the mosquito population and eliminating the infected mosquitoes. If the risk to human health remains high, additional control efforts may be necessary.

A fast response is vital when trying to reduce the risk to human health; therefore, all the above steps usually occur within one week after discovering the infected mosquitoes.

For more information visit [www.westnile.state.pa.us](http://www.westnile.state.pa.us) or call Delaware County Intercommunity Health at 610.891.5311.

