West Nile Virus

What is West Nile Virus?
West Nile Virus (WNV) is a reportable disease in Oklahoma. WNV is part of a group of viruses called arboviruses and is the leading cause of mosquito-borne disease in the continental United States. West Nile Virus is primarily spread through the bite of an infected Culex mosquito. Mosquitos become infected when they feed on infected birds. The virus must circulate in the mosquito for a few days before they can pass the virus to other animals and humans while biting. There is no documented evidence of WNV being spread from person to person or from animal to person. In a very small number of cases, WNV has been spread through organ transplant, blood transfusion, and from mother to baby (pregnancy, delivery, or breastfeeding).

Who is at risk for WNV?
Persons of any age can become ill after being bitten by an infected mosquito, but those over the age of 50 are at greater risk of developing serious illness involving the nervous system. Most people (8 out of 10) infected with the virus never become ill or have noticeable symptoms. Symptoms can commonly include fever, headache, body aches, joint pains, vomiting, diarrhea, or rash. Those with illness recover completely, but fatigue and weakness can last for weeks or months. In more severe cases, persons can develop meningitis or other neurological disease.

It is helpful to know some key points about the differences in types of mosquitoes and the features of West Nile virus transmission:

- The type of mosquitoes that hatch after severe flooding are primarily the species of mosquitoes classified as “nuisance mosquitoes”. They bite aggressively and cause lots of itchy bites, but they are not typically involved with transmission of diseases.
- Floodwater mosquito populations tend to die out 3 weeks after the rains stop and the sun dries out affected low lying areas.
- Culex species of mosquitoes are the primary vector of West Nile virus. This type of mosquito increases in numbers during mid to late summer when the temperatures climb, and the weather pattern is drier.

Since WNV was introduced into Oklahoma, previous outbreaks were characterized by higher-than-normal summer temperatures and drought.

What is the best protection for WNV?
The Oklahoma State Department of Health advises use of insect repellents—particularly those containing DEET, picaridin, oil of lemon eucalyptus (PMD), or IR 3535—when enjoying outdoor activities like gardening, yard work, camping, or other leisure activities. You can also reduce your risk of WNV by wearing long-sleeved shirts and long pants. The type of mosquitoes that transmit WNV are most active during early evening through early morning (dusk to dawn) hours, so it is important to take mosquito bite precautions during that time of the day. It is also recommended to drain or treat standing water around your home with a mosquito larvicide to reduce areas where mosquitoes may lay eggs.