

# HEALTH IMPACTS OF CLIMATE CHANGE: VECTOR-BORNE INFECTIOUS DISEASES

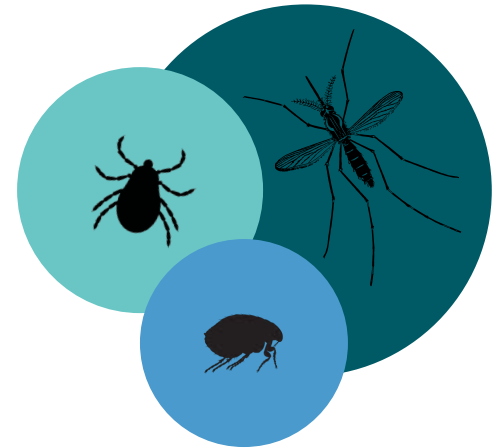
**Vector-borne diseases are transmitted by organisms such as mosquitoes, ticks, and fleas.** These vectors can carry infectious viruses, bacteria, and protozoa from animals to humans. Changing weather patterns such as increased precipitation, warmer temperatures, and shorter winters can allow vector populations to increase in size and expand their geographic range, causing illnesses to occur more frequently and introducing diseases to new areas.

## LYME DISEASE

Lyme disease is carried by ticks. As air temperatures rise ticks are likely to become active earlier in the season, increasing the risk of Lyme disease. Lyme disease symptoms include fever, headache, fatigue, and a characteristic skin rash.

## WEST NILE VIRUS & ZIKA

West Nile virus and Zika are carried by mosquitoes. Extreme temperatures increase population sizes and the geographic range of mosquitoes transmitting these viruses. More than three million people were estimated to be infected with West Nile virus in the United States from 1999 to 2010. Large outbreaks of Zika virus occurred in the United States in 2015 and 2016.



In 2017, North Carolina confirmed

# 950

tick-borne illnesses. With

## CHATHAM COUNTY

having one of the highest rates.

# DURHAM & RALEIGH

are both among the top 10 U.S. cities for growth in mosquito season since the 1980's.

The annual average mosquito season has grown by

# 40

days.