

Date:

Caleb S. Cage, Chief
Nevada Division of Emergency Management
2478 Fairview Drive
Carson City, NV 89701

Re: 2017 Spring Thaw, mosquito abatement

Dear Chief Cage:

On behalf of _____ we are writing to request financial assistance for our mosquito abatement program due to the anticipated increase of vector-borne diseases this summer/fall and potential for a critical public health threat.

In January and February 2017, Northern Nevada had an unprecedented amount of snowfall in the Sierras, resulting in massive spring thaw flooding and a consequential increase of standing water. _____ county saw an increase of _____ acre feet of flood water resulting in swollen pools of standing water.

According to the *Special Report Trends in West Nile Virus Nevada, June, 2017*, by the Division of Public and Behavioral Health Department of Health and Human Services, it states that Northern Nevada will see the expected spread of West Nile Virus (WNV). Since its emergence in 2003, 308 residents contracted WNV infections in Nevada; of those 138 cases (45%) were classified as "neuroinvasive diseases" including meningitis and encephalitis, and 170 cases (55%) were classified as "non-neuroinvasive disease". Since 2003, there had been significant variations in the size and severity of WNV outbreaks. Annual frequency of WNV cases in Nevada ranged from two cases in 2003 to 124 in 2006.

The report further states that following the 2006 Northern Nevada Flood, which was the last significant flood, the state experienced the most severe and largest WNV Outbreak on record. More than 40% (124 cases) of all WNV cases ever reported in Nevada occurred during that one WNV season in 2006; 97.7% of WNV cases after the flood of 2006 were among residents of Northern Nevada. WNV cases were also more severe in flooded areas/counties in the north such as Lyon, Douglas and Churchill Counties which had not experienced such large outbreaks of this mosquito-borne viral infection before the 2006 Northern Nevada Flood.

It is expected that the Culex mosquito, the vector that transmits WNV, will rapidly and excessively breed and multiply in communities affected by the flood, feeding on large animals such as horses and cattle, and travelling several miles to reach rural and urban populations of Northern Nevada. Mosquitos become infected with WNV virus when they feed on infected birds. Infected mosquitos can then spread the virus to humans and other animals. WNV cycles between mosquitos (especially Culex species) and birds. Some infected birds can develop high levels of the virus in their bloodstream and mosquitos can carry the virus after biting infected birds. After about a week, infected mosquitos can pass the virus to more birds when they bite. Infected mosquitos with WNV also bite and infect humans, horses and other mammals.

Information needed by jurisdictions requesting FEMA assistance

1. Amount and type of flooding
2. Evidence of higher level of disease transmitting mosquitoes
3. Evidence of significant number of disease-carrying mosquitoes
4. Evidence of the potential for disease transmission and human exposure disease-carrying mosquitoes based on detection of arbovirus disease in sentinel poultry
5. Threat to Emergency workers/ Ranchers working outdoors – evidence by an abnormal rise in trap counts or change in species composition
6. Verification from medical facilities – mosquitoes directly resulted in secondary infection
7. Vector control measures based on surveillance data
8. Mosquito population density pre and post disaster including information on species composition
9. Arbovirus transmission activity with locations of surveillance
10. Type of mosquito management required
 - a. aerial vs ground-based treatment
 - b. adulticides vs larvicides
 - c. duration of application
 - d. areas where the interventions are needed
11. Statement regarding that the insecticide formulations must be among those approved and registered by EPA and approved chemical for use in Nevada
12. Breeding habitat removal or alterations - such as efforts of dewatering by pumping, draining or removing standing water.
13. Types of Public Information used to direct resident to remove the mosquito breeding habitat. (Flyers in resident's water bills, PSA's, newspaper campaigns etc.)

Other items for documentation:

Current trap and dip data verifying the hazard vs trap and dip data on a normal year

Spray/ Dip area maps detailing the affected zone vs normal year activity

Three years of NON-DISASTER baseline data, including all cost data

Please note that these do not have to be consecutive years.