

SUMMARY OF MOSQUITO-BORNE VIRUS SURVEILLANCE AND EMERGENCY RESPONSE PLAN

The CVMVCD Mosquito-Borne Virus Surveillance and Emergency Response Plan describes an enhanced surveillance and response program for the Coachella Valley dependent on the level of risk of mosquito-borne virus transmission to humans.

RESPONSE LEVELS

The Plan is based on conditions that exist at three response levels identified as:

- Normal season
- Emergency planning
- Epidemic

Seven risk factors that are analyzed to determine the appropriate response level include:

1. Environmental conditions (Salton Sea level, rainfall, agricultural irrigation, temperature, duck club flooding)
2. Adult mosquito vector abundance
3. Virus isolation rates from mosquitoes
4. Sentinel chicken seroconversion rates
5. Infection rates in wild or domestic animals
6. Human cases of mosquito-borne viruses
7. Proximity of detected virus activity to urban or suburban regions

Each of these factors is rated on a scale of 1 to 5, with 5 representing conditions indicative of a high risk of human infection with a mosquito-borne virus. An average rating is determined for the seven factors and is correlated with the response level as follows:

- **Normal season (1.0 to 2.5)**
- **Emergency planning (2.6 to 4.0)**
- **Epidemic (4.1 to 5.0)**

Key Agencies Accountable for the Emergency Response Plan

- A. Local Mosquito and Vector Control Agencies
- B. Local Health Departments
- C. California Department of Health Services
- D. University of California at Davis
- E. Mosquito and Vector Control Association of California
- F. California Department of Food and Agriculture

CVMVCD RESPONSE TO DIFFERENT LEVELS OF EMERGENCY

LEVEL 1 – NORMAL SEASON

- Conduct routine mosquito and virus surveillance
- Conduct routine mosquito larval control
- Conduct routine public education
- Release routine press notices
- Inventory of pesticide and equipment
- Evaluate pesticide resistance in vector species
- Ensure adequate emergency funding
- Establish routine communication with the local office of emergency services personnel
- Obtain Standardized Emergency Management System (SEMS) training

LEVEL 2 - EMERGENCY PLANNING

- Enhance public education (include messages on the signs and symptoms of encephalitis; inform the public about pesticide applications)
- Increase surveillance and control of mosquito larvae
- Increase adult mosquito surveillance
- Increase number of mosquito pools tested for virus
- Conduct localized chemical control of adult mosquitoes
- Contact commercial applicators in anticipation of large scale adulticiding
- Ensure notification of key agencies of the presence of viral activity
- Review candidate pesticides for availability and susceptibility of vector mosquito species

LEVEL 3 – EPIDEMIC CONDITIONS

- Continue enhanced larval surveillance
- Broaden the geographic coverage of adult mosquito surveillance
- Increase intensity and extent of adult mosquito control
- Coordinate the response with the local Office of Emergency Services or if activated, the Emergency Operation Center (EOC).
- Determine whether declaration of a local emergency should be considered by the County Board of Supervisors (or Local Health Officer)
- Continue mosquito education and control programs until mosquito abundance is substantially reduced and no additional human cases are detected