



INYO COUNTY HEALTH & HUMAN SERVICES

PUBLIC HEALTH BRIEF

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Abnormally High Water Spreading in Owens Valley Expected to Increase Mosquito Activity

The Owens Valley Mosquito Abatement Program (OVMAP) reports that extra irrigation water spreading is occurring throughout the Owens Valley, making mosquito control difficult in many areas. According to the OVMAP Weekly report for Week 27 (6/30-7/6/19), “[OVMAP] staff has shifted into high gear in an attempt to stay ahead with their larviciding treatments this week. Many mosquito sources are becoming inaccessible due to the massive amounts of water spreading and enormous irrigation unlike we’ve ever seen before, at least not during the past couple decades.”

West Nile Virus testing for mosquito samples from the Owens Valley has not started for this season, but WNV has been detected in 12 CA counties so far in 2019. As of July 5, 2019, **no human cases** of WNV have been identified in California (source: <http://www.westnile.ca.gov/>).

Persons infected with WNV are most commonly asymptomatic or have a mild illness characterized by headache and fever. More severe disease presents with fever, headache, stiff neck, stupor, disorientation, coma, tremors, occasional convulsions (especially in infants), and spastic (but rarely flaccid) paralysis. The risk of severe disease is increased in very young, elderly, and immunocompromised populations. There is no vaccine or specific antiviral treatment for WNV infection.

Serologic testing is the primary method for diagnosing WNV infection. A rapid and accurate diagnosis of acute neuroinvasive disease can be made by detection of WNV-specific IgM antibody in serum or CSF. These tests are available commercially.

A positive IgM test result should be confirmed by plaque neutralization antibody testing (PRNT) which can be arranged through the Inyo County HHS- Public Health Division.

Patient treatment for WNV infection is supportive. Cerebrospinal fluid (CSF) studies in neuroinvasive disease demonstrate moderate, typically lymphocytic, pleocytosis. CSF protein is also elevated in 50% to 75% of cases. Computed tomography scans are usually normal and electroencephalographic results show generalized slowing without focal activity.

For Clinicians:

- **Please include WNV in your differential diagnoses**
- **In patients diagnosed with aseptic meningitis or encephalitis, consider ordering an Arbovirus panel on the CSF.**
- **For questions and consultation, contact Inyo County Health Officer, Dr. Richardson, at 760-920-0433.**
- **Report all WNV disease cases to Inyo County Public Health at 760-873-7868 (ph) or by FAX at 760-873-7800.**

- **Advise patients to prevent mosquito bites by**
 - **Using mosquito repellent.** The Environmental Protection Agency (EPA) recommends using insect repellents containing DEET, Picaridin, or IR3535. Some oil of Lemon eucalyptus and Para-Menthane-Diol products provide similar protection.
 - **Avoiding outdoor activities if possible during dawn and dusk.** This is especially important during the first two hours following sunset, when species that spread West Nile Virus are actively biting.
 - **Wearing long sleeves and pants.** This provides additional protection when used in conjunction with insect repellent

More information can be found on the following websites:

- **CDC Mosquito Bite Prevention**
<https://www.cdc.gov/westnile/index.html>
- **CA Department of Public Health's Mosquitoes and Mosquito-Borne Illnesses**
<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/WestNileVirus.aspx>
- **CA West Nile Virus Website**
<http://www.westnile.ca.gov/>