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MEMORANDUM

TO: Local Health Departments, Local Emergency Management Agencies
Illinois State Response Agencies

FROM: David W. Culp, Ph.D.
Deputy Director, Office of Health Protection

DATE: June 24, 2015

SUBJECT: Recommendations for Mosquito Control after Flooding

Large numbers of floodwater mosquitoes (*Aedes vexans* and other species) appear about two weeks after heavy rains and flooding. Floodwater mosquitoes are rarely infected with West Nile virus (WNV), so control of this group is not a priority for public health agencies. Effective control of “nuisance” floodwater mosquitoes requires a systematic *regional* abatement program that includes larviciding. On-going, non-emergency, systematic “nuisance” mosquito abatement costs range from \$5,000 to \$15,000 per square mile per year. Additional cost estimates for emergency mosquito control by private contractors may include:

- Ground larviciding: \$65 per acre
- Aerial (helicopter) larviciding: \$160 per acre
- Ground spraying (truck-mounted unit) for adult mosquitoes: \$80 per linear road mile
- Aerial spraying (helicopter) for adult mosquitoes: \$9 per acre
- Aerial spraying (fixed-wing aircraft) for adult mosquitoes: \$2 per acre

Rather than focus on addressing floodwater mosquitoes, IDPH recommends that municipalities target the primary vector of WNV, the house mosquito (*Culex pipiens*), for prevention of WNV. After flooding, water impoundments initially produce large numbers of floodwater mosquitoes. The same water impoundments may concentrate during hot summer days and start to produce large numbers of *Culex* mosquitoes. Consequently, local agencies within municipal boundaries should continue to focus mosquito larvicide treatments on catch basins, ditches and “old” water impoundments that may produce large numbers of floodwater mosquitoes. The same water impoundments may concentrate during hot summer days and start to produce large numbers of *Culex* mosquitoes. Consequently, local agencies within municipal boundaries should continue to focus mosquito larvicide treatments on catch basins, ditches and “old” water impoundments that may produce *Culex* mosquitoes. Treatment of water impoundments in unincorporated rural areas depends on available funding (and the funds needed could be substantial to treat such sites).

In unincorporated rural areas, the use of insect repellents and other personal precautions may be the only practical methods for preventing mosquito bites. Precautions include:

- Avoiding being outdoors when mosquitoes are most active, especially between dusk and dawn,
- Wearing shoes and socks, long pants and a long-sleeved shirt, and applying insect repellent that contains DEET, picaridin, oil of lemon eucalyptus or IR 3535, according to label instructions, when outdoors,
- Making sure doors and windows have tight-fitting screens, repairing or replacing screens that have tears or other openings, and trying to keep doors and windows shut, especially at night, and
- Eliminating all sources of standing water that can support mosquito breeding, including water in bird baths, ponds, flowerpots, wading pools, old tires and any other receptacles.

Additional information about West Nile virus can be found on the Illinois Department of Public Health's Web site at <http://www.dph.illinois.gov/topics-services/environmental-health-protection/animal-pest-control/west-nile-virus-surveillance>.

For additional information, see the Joint Statement on Mosquito Control in the United States from the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control and Prevention (CDC) at <http://www2.epa.gov/mosquitocontrol>.