Local Health Department (LHD) Action Plan Recommendations
(with emphasis on Chikungunya / Dengue Vector Control)

I. Emergency Communications -- Make certain that emergency communications for the LHD are intact and functioning:
   a. Double-check 24/7/365 on-call communications.
   b. Double-check Health Alert Network communications.
   c. Clinical cases of chikungunya should be reported within 24 hours as an “unusual condition or emerging infectious disease of public health importance.”

II. Recognize Potential Mosquito Breeding Sites – During routine environmental field work and as time allows, monitor the distribution of sites capable of breeding *Aedes albopictus*, the ‘Asian tiger mosquito.’
   a. *Aedes albopictus* deposit eggs along the inner edges of water-containing receptacles, both natural (tree holes) and artificial (tires, rain barrels, buckets, wading pools, concrete basins)
   b. Although *Aedes albopictus* are found in many different habitats, these mosquitoes have a preference for urban habitats
   c. Mosquito complaints from the public can be shared with the local health department and the Division of Infectious Epidemiology. Mosquito complaints can be very useful for identifying mosquito breeding sites.

III. Source Reduction -- During routine environmental field work and as time allows, counsel local home and business owners about source reduction – the most effective long-term solution to mosquito control:
   a. Discarded, unused and unmaintained artificial containers need to be eliminated
   b. If artificial containers cannot be eliminated, water must not be allowed to accumulate in the container (through storage indoors, puncturing, or filling with a solid material)

IV. Mosquito Larval Control -- If property owner is unwilling or unable to comply with ‘mosquito source reduction’ strategy, apply ‘mosquito larval control strategies.’ This is effective for short term (weeks) control.
   a. If artificial containers cannot be eliminated, biological microbial insecticides (*Bacillus thuringiensis israelensis* (Bti), *Bacillus sphaericus* (Bs)) and chemical insecticides are available.
   b. In West Virginia, chemical pesticide application is regulated by West Virginia Department of Agriculture.

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V. **Adult Mosquito Control** – Adult mosquito control (‘spraying for mosquitoes’) is the least effective method of control and is generally conducted only in emergency situations.
   a. Standard night-time applications will not be effective for *Aedes albopictus* since this species is a daytime biter. Ultra-low volume (ULV) adulticide application should be conducted at dusk and dawn, when *Aedes albopictus* are most actively flying.
   b. When transmission is believed localized to a small area, ULV and insecticide barrier applications could prove effective. Adult *Aedes albopictus* congregate in heavily vegetated areas.
   c. Additional information about mosquito integrated pest management is available at [http://www.dhhr.wv.gov/oeps/disease/Zoonosis/Mosquito/Pages/IPM.aspx](http://www.dhhr.wv.gov/oeps/disease/Zoonosis/Mosquito/Pages/IPM.aspx)
   d. West Virginia Department of Agriculture regulates chemical pesticides in our state: [http://www.wvagriculture.org/Division_Webpages/READ-regulatory.htm](http://www.wvagriculture.org/Division_Webpages/READ-regulatory.htm)

VI. **Mosquito Surveillance** – If personnel and other resources are available, local health departments can also conduct mosquito surveillance within their jurisdictions to monitor populations of the Asian tiger mosquito (*Aedes albopictus*), using the following methods:
   a. Carbon dioxide emitting light traps and BG Sentinel traps with pheromone lures are effective in collecting adult *Aedes albopictus*.
   b. Mosquito gravid traps will occasionally capture adult *Aedes albopictus* laying eggs.
   c. *Aedes albopictus* larvae can be collected using mosquito dippers.
   d. Oviposition traps will collect eggs which can be reared to larvae for correct species identification.

VII. **Consultation** – for questions, please contact the epidemiologist on-call at (304)-558-5358, extension 1 or (800)-423-1271, extension 1. Mosquito complaints and questions about mosquito surveillance and control can be fielded at this number.