

Dallas County Mosquito Control: Action Thresholds

The following recommendations are intended to guide mosquito control programs and may include other applicable community procedures. All actions are subject to change without notice due to organizational priorities, weather or other unforeseen circumstances.

Risk Level One – Normal Response	
Conditions: Probability of human outbreak is low (Year-round status in the absence of escalating triggers)	Trigger: Normal mosquito activity with little or no evidence of viral activity
Surveillance	
<ul style="list-style-type: none"> • Routine monitoring of public health threats by DCHHS Epidemiology Division • Monitor larval and adult mosquito bionomics (dip counts and trap surveillance) • Identify mosquito samples and laboratory testing for disease 	
Information/Education	
<ul style="list-style-type: none"> • Public education and community outreach programs focused on risk potential, personal protection and residential source reduction 	
Control Measures	
<ul style="list-style-type: none"> • Source reduction through physical and environmental measures • Biological – mosquito fish • Larvicides (surface oils, biorational bacterial products and insect growth regulators) 	

Risk Level Two – Public Health Advisory	
Conditions: Probability of human outbreak is moderate	Trigger: Virus detected in mosquito samples
Surveillance	
<ul style="list-style-type: none"> • Increased mosquito surveillance in areas of positive traps 	
Information/Education	
<ul style="list-style-type: none"> • Public health advisory released • Advise the public and emphasize source reduction, personal protection and disease symptoms 	
Control Measures	
<ul style="list-style-type: none"> • Ground-based ULV adulticide application multiple times around positive trap location, with continued mosquito surveillance * • Contact vendor for ground ULV assistance in designated treatment areas • Larviciding of breeding sites around infected trap sites 	

Risk Level Three – Public Health Warning	
Conditions: Probability of human outbreak is high	Trigger: Virus detected in multiple mosquito samples from different times and locations; or confirmed human case(s)
Surveillance	
<ul style="list-style-type: none"> • Increase surveillance activities in adjacent areas where spread of virus is likely 	
Information/Education	
<ul style="list-style-type: none"> • Public health warning released • Publicize vector control measures within the target communities • Warn the general public of the probability of disease and provide guidance 	
Control Measures	
<ul style="list-style-type: none"> • Adjust ground-based ULV adulticide equipment to maximum label rate • Ground-based ULV adulticide application of area around confirmed human case(s) after mosquito trapping confirms the presence of disease * • Ground-based ULV adulticide application of positive mosquito sites and expanded areas around sites * • Contact vendor for possible aerial treatment(s) 	

Risk Level Four – Public Health Emergency	
Conditions: Human outbreak is confirmed	Trigger: Multiple human cases confirmed and detection of increased or continued viral mosquito activity
Surveillance	
<ul style="list-style-type: none"> • Continued mosquito surveillance in areas of confirmed human cases 	
Information/Education	
<ul style="list-style-type: none"> • Public health emergency considered • Declaration of public health emergency/distribution of emergency alerts 	
Control Measures	
<ul style="list-style-type: none"> • Ground-based ULV adulticide application in areas of clustered human cases * • Recommend aerial adulticide applications in targeted zones 	

*Ground based ULV applications should ideally be conducted multiple times per week in targeted areas based on mosquito surveillance and positive mosquito virus isolates