



City of Denton

City Hall
215 E. McKinney Street
Denton, Texas
www.cityofdenton.com

AGENDA INFORMATION SHEET

DEPARTMENT: Environmental Services and Sustainability Department

ACM: Frank Dixon

DATE: September 30, 2025

SUBJECT

Consider approval of a resolution of the City of Denton, a Texas Home Rule Municipal Corporation, authorizing the use of Risk Level 5 control measures pursuant to the City's Mosquito Surveillance and Response Plan – 2025 Season, and declaring an effective date.

BACKGROUND

The Mosquito Surveillance and Response Plan (the "Plan") guides the City's responses to West Nile Virus (WNV) activities, including mosquito control measures for reducing the spread of WNV among residents. The plan establishes five (5) Risk Levels based on activity documented by the trapping and testing of mosquitoes for WNV and WNV human epidemiological data. The Plan specifies Conditions, Triggers, Recommended Responses and Control Measures for each risk level.

If WNV is present, it is usually more prevalent during the summer months. Starting May 4, 2025, an average of 8 mosquito monitoring locations across the City have been deployed overnight at approximately weekly intervals. On July 6, 2025, the City received notification from the Texas Department of State Health Services for one WNV positive mosquito trap location. The positive WNV result triggered an increase to Level 3, "Public Health Concern." On August 7, 2025 the City moved to Risk Level 4 based on multiple mosquito pools collected at different times and locations testing positive for arthropod-borne virus/diseases. Through September 19, 2025, a total of 10 WNV positive trap events occurred out of 154 total trap events.

On September 19, 2025, the City of Denton received notification from the Denton County Health Department of the first WNV human case within Denton. The positive human result keeps Denton at Risk Level 4. Risk Level 4 control measures include finalizing all items for ground level spraying should Risk Level 5 be triggered. Summary of the current and potential risk levels:

Risk Level 4 - Public Health Warning

Condition:	Probability of human outbreak is moderate to high
Trigger:	Multiple mosquito pools collected at different times and locations test positive for arthropod-borne virus/diseases. Single human case confirmed with laboratory testing.
Control Measures:	Finalize all actions needed for implementing ground level spraying activities using ultra-low volume (ULV) applications of pyrethroids.

Risk Level 5 – Public Health Alert

Condition: Human outbreak is confirmed
Trigger: Multiple human cases. Cases must be confirmed by laboratory testing.
Control Measures: Following IPM criteria: time of year, the extent of previous mosquito control activities, the current level of mosquito activity, weather conditions, the species of mosquitoes that test positive for disease, the number of local mosquito pools which test positively for disease, the likely time until a killing frost, the density of roads or other access to mosquito breeding grounds, and the density of human populations. Adulticiding or spraying will be considered to rapidly reduce mosquito populations and halt disease transmission.

Staff are providing this information to discuss the topic of ground-based applications of mosquito adulticides (a.k.a. spraying) with the City Council. If the Council decides to authorize ground-based adulticide applications, and the City reaches Risk Level 5, staff will take the necessary measures to ensure applications are completed in accordance with the Plan.

RECOMMENDATION

Staff recommends approval of a resolution authorizing ground-based applications of mosquito adulticides if the City reaches Risk Level 5.

FISCAL INFORMATION

Expenses associated with control measures would be funded from the Watershed Protection Division's operating fund.

EXHIBITS

1. Exhibit 1-Agenda Information Sheet
2. Exhibit 2-Resolution

Respectfully submitted:
Michael A. Gange
Director of Environmental Services and Sustainability