Summer 2025

MOSQUITO NEWSLETTER

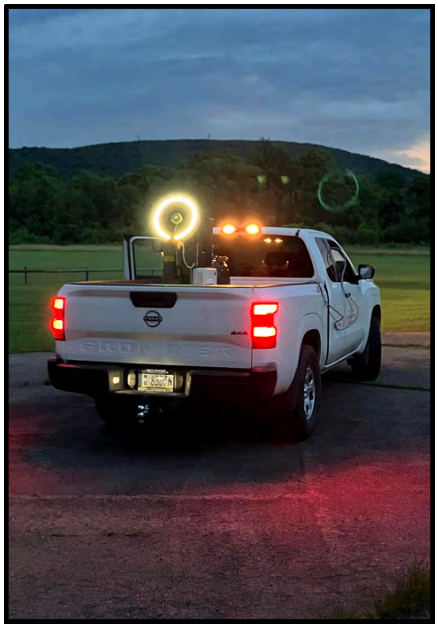
Issue 2

Luzerne Conservation District

A BUSY START TO THE SEASON!

Persistent early season rainfall and Susquehanna River flooding in May (river exceeded 18' as monitored by the Wilkes Barre river gauge) triggered a significant mosquito emergence and made for a busy start to the season! Through July 23rd, our team worked to lower the mosquito populations by conducting:

- Over 130 acres of larval control
- 169 catch basin treatments
- Over 5,000 acres of adult control
  - Approx. 4,800 acres treated with truck-mounted ULV sprayer
  - Over 33 acres treated with thermal fogger.
  - Approx. 6 acres of backpack barrier treatments.



District truck with ULV Sprayer

A BEHIND-THE-SCENES GLIMPSE INTO OUR PROGRAM:

Our program must collect data and meet disease and/or population thresholds prior to applying control products. This is to ensure that there are no adverse impacts to the environment and non-target species during our mosquito control operations. The following pages will give you a behind-the-scenes look into how our program operates.

Visit DEP's Vector Management page for more information and season updates!
https://www.pa.gov/agencies/dep/programs-and-services/integration/vector-management

LUZERNE CONSERVATION DISTRICT

MUNICIPALITIES WITH 2025 SEASON WEST NILE VIRUS DETECTIONS*

Kingston Borough	Wilkes-Barre City
Exeter Borough	Edwardsville Borough
Wyoming Borough	Nanticoke City
West Pittston Borough	

MUNICIPALITIES WITH 2025 SEASON JAMESTOWN CANYON VIRUS DETECTIONS*

Plymouth Township
Wyoming Borough
Kingston Borough
Edwardsville Borough
Plains Township

*DATA UP TO 7/24/25

Summer 2025 | Issue 2

MOSQUITO NEWSLETTER

www.luzernecd.org | 570-674-7991

PROGRAM BREAKDOWN

LARVAL SURVEILLANCE:

Mosquito larval surveillance and control is a critical part in managing the mosquito population. Mosquito larvae thrive in areas of stagnant standing water (artificial containers, tires, stormwater facilities, floodplains, etc.). Identifying and treating these areas are important in eliminating mosquito emergence. Our staff uses aerial imagery, flood inundation mapping, and other GIS tools to assist in identifying areas of standing water. Most of the time is spent conducting field surveys of standing water areas, using a dipper to collect mosquito larval samples. Samples are sent to a DEP lab for species identification and all data is logged into a comprehensive database.

Dipper containing mosquito larvae

MDC Program Coordinator Keith George conducting larval control following heavy rains

LARVAL CONTROL:

When larvae are found, we apply a larvicide control product. A product containing the active ingredient *Bacillus thuringiensis israelensis* (Bti) is our main line of defense, which has no toxicity to humans, pets, or non-target species.

When mosquito larvae are found in large, inundated floodplains as occurred in May, larval control becomes difficult. These areas are densely vegetated, contain deep water, and may be unsafe or inaccessible. Backpacks are needed for the mass application of Bti. Since mosquito larvae could emerge as adults in as little as 5 days following egg hatching, time does not always allow our staff to treat the hundreds of acres of floodplains following a flood event.

Summer 2025 | MOSQUITO NEWSLETTER | Issue 2

www.luzernecd.org | 570-674-7991

PROGRAM BREAKDOWN CONTINUED

MDC Program Specialist Lauren Holder conducting adult control following high trap count

ADULT SURVEILLANCE AND CONTROL:

Continuous adult surveillance is important in monitoring mosquito population trends and mosquito-borne diseases. Our staff uses various mosquito traps to collect adults. Collected mosquitos are sent to the DEP lab for species identification and screened for diseases such as West Nile Virus and Jamestown Canyon Virus. Adult mosquito control is not implemented unless disease is detected or population thresholds are exceeded. Adult control products are applied by backpack sprayers, thermal fogger, or a truck mounted ultra-low-volume (ULV) sprayer. Weather, time-of-day, environmental sensitive areas, and other factors need to be considered prior to implementing adult control and we must adhere to the product label rates and application procedures.

A trap used to collect adult mosquitos

Larval Site Highlight

The water resting in this toy was full of mosquito larvae! (It only takes a bottlecap of water for mosquitoes to breed)

Summer 2025 | Issue 2

MOSQUITO NEWSLETTER

www.luzernecd.org | 570-674-7991

PARTNER HIGHLIGHT

Pictured from left to right: Thomas Mayka (Stormwater Coordinator) and Seth Johnson (Maintenance)

PARTNER HIGHLIGHT: DALLAS AREA MUNICIPAL AUTHORITY

Dallas Area Municipal Authority (DAMA) Stormwater Program is partnered with Dallas Borough, Dallas Township and Kingston Township to manage MS4 requirements through a fee (not a tax). The MS4 program was instituted to reduce pollution entering our local waterways, which eventually drain into the Chesapeake Bay.

In Spring of 2024, DAMA partnered with House Representative at the time Mike Cabell to conduct a tire cleanup. They chose to remove approximately 40 tires from the bank behind the wastewater treatment plant, estimating some of the tires to be from the 1960's. A single tire can breed 10,000 mosquitoes in a season and even removing one tire can significantly reduce disease risk. This was a team effort, with employees scrambling up the bank and rolling them down to be recycled.

DAMA also prevents mosquitoes by having bluebird boxes at stormwater ponds (mosquito predators), engineering stormwater designs that drain properly to avoid mosquito breeding habitat, and ensuring that wet ponds have consistent water flow.

Bluebird box at stormwater basin

Stormwater basin in Dallas Township designed to empty within 72 hours so it doesn't serve as a mosquito breeding site

MOSQUITO TEAM MEMBERS

Keith George (Coordinator)
- keith@luzcd.org
- (570) 674-7991 ext.6

Lauren Holder (Specialist)
- lauren@luzcd.org
- (570) 674-7991 ext.9

Mike Skokoski (Technician)
- michael@luzcd.org
- (570) 674-7991