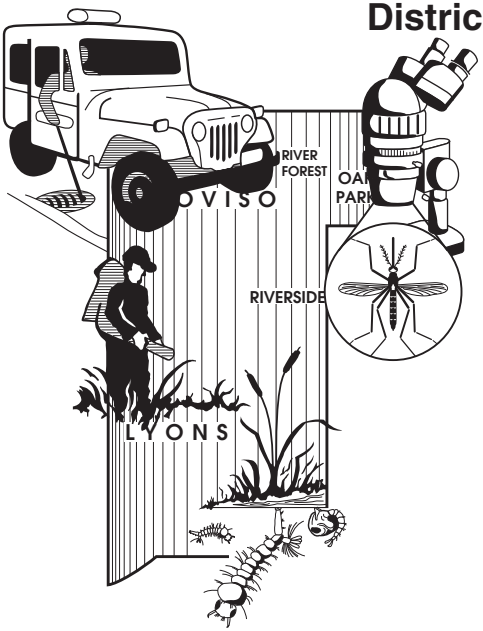
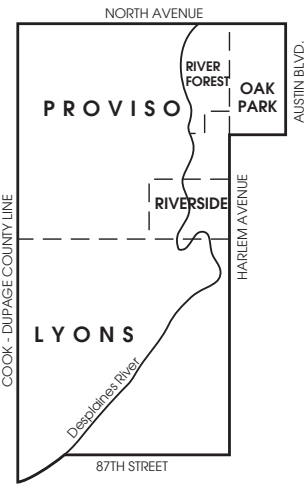
Desplaines Valley
Mosquito Abatement District



Prepared by the Desplaines Valley Mosquito Abatement District

THE DESPLAINES VALLEY Mosquito Abatement District encompasses a 77 square mile area in the western suburbs of Chicago. The district is comprised of Lyons, Oak Park, Proviso, Riverside, and River Forest townships and includes thirty one villages. The district is an independent municipality, established in 1927 by the "Mosquito Abatement Districts Act" which provided for the organization of tax supported mosquito abatement districts within Illinois. It is one of the two original districts formed under this Act. The district is administered by a five member Board of Trustees. Operations are financed from a real estate tax within the townships serviced. Control operations are conducted by permanent and seasonal employees.



District Goals

It is the goal of the Desplaines Valley Mosquito Abatement District to reduce mosquito annoyance and potential disease transmission by the mosquito using the safest and most environmentally sound methods available. It is our responsibility to do this while protecting the public and the environment from inappropriate risks. The district uses a variety of methods and approaches to accomplish this task.

It is through the monitoring of various weather conditions and the surveillance of larval and adult mosquito populations that the district learns where a mosquito problem might occur and how large it might be. With this information the district can determine the type of control that is appropriate at the time, and to coordinate efforts between the different control divisions. In addition, many other behind the scene tasks are done that support the actual mosquito control efforts.

Surveillance

The weather is the most important factor affecting mosquito production. Both rainfall and temperature determine the mosquito production rate and the predominant species at any given time. The district monitors rainfall, temperature, and other weather data at six locations throughout the district.

Larval and adult mosquito surveys provide critical information for our control efforts. The surveys are conducted on a regular basis to determine the extent, type, and concentration of mosquito populations within the district. Potential mosquito breeding sources are inspected regularly. The species of larvae taken from breeding sites are determined by the laboratory staff. All potential sources are marked on maps and numbered for reference. Individual source histories are maintained in a computer database. Adult mosquito populations are monitored through a network of light traps and gravid traps. These traps take daily samples which are identified by the laboratory staff to determine the number and types of mosquitoes present. In addition, adult mosquitoes taken in the gravid traps are tested for disease vectors such as West Nile Virus (WNV), to determine the potential for disease transmission to humans.

Control Methods

Information from the surveys helps the district determine the necessary control methods required. All control methods are accepted and recommended by the Illinois Department of Public Health and are continuously evaluated by the district to ensure desired goals. Primary mosquito control efforts used by the district focus on larval/pupal control and source elimination. Mosquitoes are confined to water during the larval/pupal stages, where they are localized and concentrated in numbers. Controlling mosquitoes at this stage when they can't “fly away” allows the district to use the most efficient, safest, and most economical methods available.

Source elimination is the only permanent method of mosquito control. This approach ranges from the simple removal of “man-made” sources such as discarded tires

or other artificial containers to the maintenance of drainage systems to prevent water retention. When source elimination is not possible, larval/pupal control becomes necessary. All other sources found to contain mosquito larvae/pupae through surveillance are treated with either a biological larvicide called Bti, an insect growth hormone called methoprene that prevents pupae from becoming adults, or a degradable larvicide oil. Sources treated by the district include artificial containers such as tires and buckets, open ditches, flooded fields, retention ponds, swamps, and extensive floodplain areas along creeks and rivers, many of which are located within the Forest Preserve District of Cook County.

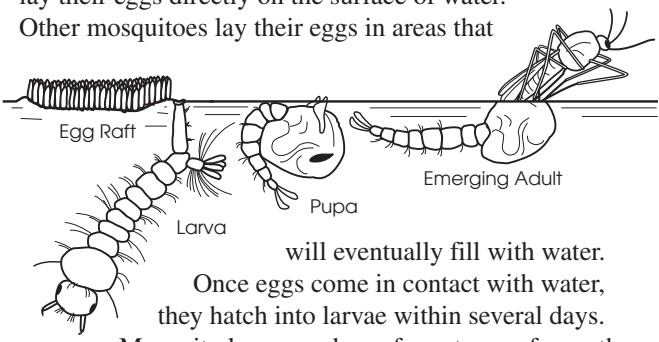
Roadside and off-road storm water catch basins are a primary mosquito source found in urban areas. Water collected in basins is often high in organic material, making them ideal for mosquito development. The kind of mosquitoes found in catch basins can become involved in disease transmission to humans, consequently treatment of catch basins is done throughout the mosquito season.

Once mosquitoes reach the adult stage and take flight, they become much more difficult to effectively control. Consequently any adult control is supplemental. The district focuses its adult mosquito control efforts in areas and at times when there is an increased potential for disease transmission, in particular WNV.

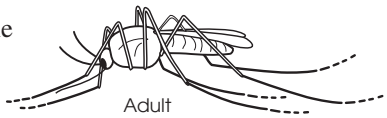
Behind The Scene

There are many tasks done behind the scene that support the actual mosquito control work. Follow-up post-treatment inspections and evaluation help insure the success of control procedures. All the district vehicles, equipment, buildings and grounds are maintained by district personnel. The laboratory and field staff maintain field records, maps, and evaluate procedures. Efforts are made to better inform the public about mosquito control through various educational activities. The district also cooperates with other public agencies that have an interest in mosquito control.

OVER 40 DIFFERENT SPECIES of mosquito are found in Illinois. While each species has its own developmental habitat, all mosquitoes need water in which to pass their early life stages. Some mosquitoes lay their eggs directly on the surface of water. Other mosquitoes lay their eggs in areas that



will eventually fill with water. Once eggs come in contact with water, they hatch into larvae within several days. Mosquito larvae undergo four stages of growth and development called instars. Larvae feed on organic material and microorganisms in the water and return to the surface of the water to breathe. Larval development may be as rapid as 5-7 days in warm weather. After the larval stages are complete the larvae shed their skins and emerge as comma-shaped pupae. Pupae are very active and dive vigorously if disturbed. Pupae do not feed while they undergo metamorphosis to the adult stage. The adult mosquito emerges from the pupal skin and rests on the water's surface until it dries.

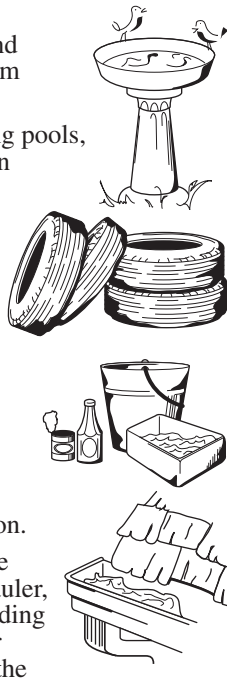


Both male and female adult mosquitoes feed on plant nectar, but only the female bites to get the blood needed for the development of eggs. While some kinds of mosquitoes can live several months, the main nuisance mosquitoes we have in this area usually survive four weeks or less. Not all mosquitoes can carry disease, nor are all mosquitoes vicious biters. Some kinds of mosquito never bite humans. Mosquitoes also vary in the distances they travel from the water they developed in. While some species will not stray more than a block or two from their source, other species' flight range can be 20 miles or more. The great diversity between different species of mosquitoes makes their control more complex, requiring a variety of approaches and methods.

How you can help

Since mosquitoes develop in standing water, places that can hold water for more than a week are likely sources of mosquitoes. Many potential breeding sites can be found around the home. These include old tires, buckets, wheelbarrows, clogged rain gutters, childrens' wading pools, etc. In addition, disease carrying mosquitoes are "home bodies" and tend to stay near their breeding sites. Residents can take the following simple steps to eliminate potential sources for these mosquitoes.

- Throw away all trash that can hold water (cans, jars, bottles, etc.).
- Clean rain gutters, downspouts, and french drains to prevent water from standing in them or on flat roofs.
- Change water in bird baths, wading pools, etc. at least once a week. Maintain swimming pools properly.
- Keep ditches and streams on or around property free of grass clippings, garbage, and other debris to insure proper flow.
- Stack pails, barrels, tubs, wheelbarrows, and similar containers upside down.
- Clean out and fill tree holes.
- Stock ornamental ponds with goldfish or other surface-feeding fish to control mosquito production.
- Dispose of used tires properly. The District is a licensed waste tire hauler, and is able to take tires to a shredding facility. For residents with four or fewer tires to dispose of, contact the District for assistance.



The Desplaines Valley Mosquito Abatement District wants and needs your help in controlling mosquitoes. Follow the suggestions in this pamphlet and contact us if you have questions or wish to notify us of areas of standing water. In addition, an informational pamphlet about mosquitoes and their role in disease transmission is available.

Call us at 708-447-1765

or visit our web site at
www.desplainesvalleymad.com