

DESPLAINES VALLEY
MOSQUITO ABATEMENT DISTRICT

8130 Ogden Avenue, P.O. Box 31
Lyons, Illinois 60534-0031

DECENNIAL COMMITTEE ON LOCAL GOVERNMENT EFFICIENCY ACT

FINAL REPORT

September 21, 2023

1	FINAL REPORT
2	COMMITTEE MEETING No. 1 <i>MARCH 16, 2023</i>
3	COMMITTEE MEETING No. 2 <i>MAY 18, 2023</i>
4	COMMITTEE MEETING No. 3 <i>SEPTEMBER 21, 2023</i>
5	2022 OPERATIONS REPORT
6	MOSQUITO ABATEMENT DISTRICTS ACT <i>70ILCS/1005</i>
7	ORDINANCES
8	PROCUREMENT, ETHICS, CREDIT CARD POLICIES
9	BEST MANAGEMENT PRACTICES
10	2002 WNV HUMAN CASE MAP

DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT 2023 DECENNIAL COMMITTEE REPORT

Background:

Public Act 102-1088 enacted on June 10, 2022 created the *Decennial Committees on Local Government Efficiency Act* requiring units of local government to form a committee to study the following:

- a) Unit of local government's governing statutes
- b) Ordinances
- c) Rules
- d) Procedures
- e) Powers
- f) Jurisdiction
- g) Shared Services
- h) Intergovernmental agreements
- i) Interrelationships with other units of local government and the State
- j) Any other issues pertinent to the unit of local government

The committee shall be formed within one year after the effective date of Public Act 102-1088, and at least once every 10 years thereafter. The committee's membership shall include the appointed members of the governing board of the governmental unit, any chief executive officer or other officer of the governmental unit, and at least 2 residents of the governmental unit who are appointed by the chair of the board of the governmental unit. The committee shall meet at least 3 times.

Committee members shall serve without compensation, but may be reimbursed by the governmental unit for their expenses incurred in performing their duties. The governmental unit shall provide administrative and other support to its committee. The committee shall meet in accordance with the Open Meetings Act, and the committee shall be a public body to which the Freedom of Information Act applies. Meetings may be held in conjunction with regularly scheduled meetings of the governmental unit as an agenda item, subject to conformance with the Open Meetings Act and a majority of committee members present.

The committee shall collect data, research, analysis, and public input in their study. The committee shall create a report with recommendations regarding increased accountability and efficiency to be submitted to the county board in which the unit of local government is located no later than 18 months after the formation of the committee. The report shall be made available to the public. After the committee has issued its report, the committee is dissolved.

Committee Formation:

The decennial committee for the Desplaines Valley Mosquito Abatement District was formed on March 16, 2023 comprised of current trustees, manager and residents as follows:

Reatha S. Henry, Chair & Trustee Member
Mark S. Azzi, Trustee Member
Robert E. Holub, Manager
Barbara Bailey, Resident
Catherine Keating, Resident

Introduction:

The Desplaines Valley Mosquito Abatement District encompasses a 77 square mile area of the DesPlaines River and Salt Creek valley in the western suburbs of Chicago, Illinois. This area is bound by the Cook-DuPage county line on the west, North Avenue on the north, 87th Street/DesPlaines River on the south, and Harlem Avenue on the east except in Oak Park where Austin Boulevard is the eastern boundary. The District is comprised of Lyons, Oak Park, Proviso, Riverside, and River Forest Townships and includes thirty-one villages.

The Desplaines Valley Mosquito Abatement District was 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 mosquito abatement districts formed under this Act.

The District is administered by a five member Board of Trustees who are appointed by the Cook County Board President for four year terms as provided by Illinois Statute. Five full-time employees comprise the permanent staff. During the summer months, up to 16 seasonal employees are employed.

Operations are financed totally from a tax on real estate within the five townships of the District. The District operates on an annual appropriation for the fiscal year from May 1 through April 30, and according to law is authorized to levy taxes up to and including 0.025 per hundred dollars of assessed valuation. For the past 20 years, the total tax rate has averaged 0.013, well below this maximum. The District’s assessed valuation is \$10,897,364,686 (2021) with approximately 375,000 residents.

The District maintains aggressive mosquito control programs against both nuisance and vector mosquitoes. In addition, rigorous testing for mosquito borne disease is conducted to minimize transmission to residents. Full details are summarized in the 2022 Operations Report attached in *Appendix 5*.

Committee Meeting No. 1:

The initial meeting of the decennial committee was held on March 16, 2023 with agenda and meeting minutes included in *Appendix 2*. The following topics were addressed during this initial meeting:

a) *Unit of local government's governing statutes*

The Desplains Valley Mosquito Abatement District was established and operates under Illinois Statute 70ILCS 1005/Mosquito Abatement Districts Act. A copy of the Statutes is included in *Appendix 6*.

b) *Ordinances*

The board of trustees formally administers its powers provided by Illinois Statute through the adoption of ordinances. Ordinances require adoption by the majority of trustees and remain in effect unless repealed or reach a designated termination date. Primary ordinances adopted by the District trustees include Budget and Appropriation, Tax Levy, Personnel Policies, and any contracts. Copies of the Budget and Appropriation and Tax Levy Ordinances are included in *Appendix 7*.

c) *Rules*

Illinois Statute sets the parameters for the District's operations. The District administers the parameters through adopted Ordinances establishing internal procedures/rules for procurement, ethics, credit cards, employee personnel handbooks with further refinement through operational division handbooks. Rules established by the District are administered by permanent staff/trustees. Any issues which cannot be addressed/resolved at the District level will escalate to the Illinois Department of Public Health, County and/or State levels as necessary. Copies of various policies are included in *Appendix 8*.

d) *Procedures*

Administrative procedures were addressed in the previous section. The District is required by federal law to obtain and maintain a NPDES permit for any application of pesticides which may eventually reach public waterways. As part of the application process and actual permit, the District provides a document entitled "Best Management Practices for the Integrated Pest Management of Mosquitoes". This document summarizes all mosquito control operations utilized by the District with copy included in *Appendix 9*.

Committee Meeting No. 2:

The second meeting of the decennial committee was held on May 18, 2023 with agenda and meeting minutes included in *Appendix 3*. The following topics were addressed during this second meeting:

e) Powers

Specific powers provided to the District are set by Illinois Statute 70ILCS/1005/0.01-13a. As addressed in previous sections, these powers allow the District and board of trustees to conduct mosquito abatement operations. The District's powers are limited to those provided by statute. The District is required to report to the Illinois Department of Public Health, which has disciplinary authority to the statutory powers.

f) Jurisdiction

The physical boundaries of the District define the jurisdiction of the District with regard to its service area. Statute has provision for annexation into and de-annexation from the District, hence the potential for a change in service area. The District also has authority to contract with other entities to provide mosquito abatement services, with this serving as a potential to expand jurisdiction.

g) Shared Services

Mosquito control operations are very specific to the local geography/composition of any given area. Mosquito demographics can and do vary greatly within a short distance. Hence mosquito control operations must be capable to address this variance, and is the reason individual mosquito abatement districts exist. Shared physical mosquito control operations cannot be successful from a logistical perspective, however from a support perspective shared services are practiced. The District does combine insecticide purchases with other Districts to take advantage of bulk pricing and maximum product rebates. Our District maintains a network of surveillance traps to determine mosquito population levels, and disease vector levels present within the District. This information is shared with local, county, state health departments, and other mosquito abatement districts. In addition, the Brookfield Zoo along with Villages are included in this information loop as applicable to their specific area.

h) Intergovernmental Agreements

The District maintains several intergovernmental agreements within its operations. These include:

1) Illinois EPA - Used Tire Collection

The District routinely collects fly-dumped tires throughout its service area. The tires provide a significant source of vector mosquitoes, and elimination is the most efficient method of mosquito control. Collected tires are brought to District headquarters, and in turn are disposed through the State EPA Used Tire Collection Program.

2) Mosquito Abatement Districts - Altosid Rebate

Altosid insecticide products are only sold through agency pricing, however manufacturer rebates are available based on level of product purchased. All Districts who use this product have an agreement with Central Life Sciences to allow individual District purchases to be combined to meet and receive the highest rebate level possible.

3) Mosquito Abatement Districts - Joint Insecticide Purchase

Our District combines its other insecticide product purchases with other Districts to take advantage of volume pricing.

i) Interrelationships With Other Units of Local Government and the State

The District maintains close interrelationships with other units of local government and the State which include:

- 1) Villages within District
- 2) Local Health Departments
- 3) Cook County Department of Public Health
- 4) Illinois Department of Public Health
- 5) Forest Preserve District of Cook County
- 6) Illinois Nature Preserves Commission
- 7) Brookfield Zoo
- 8) Other Mosquito Abatement Districts

The District has a vital role in the public health of its residents, and interrelationships with other entities is essential to the success of the District's mosquito control activities.

j) Other Issues Pertinent to the Unit of Local Government

The District addresses issues pertinent to its ability to perform mosquito control operations including administrative aspects through contracts and/or agreements which include:

- 1) Clarke - Altosid Insecticide Product Supply Agreement
- 2) Professional Contracts
 - a) Hartigan & O'Connor - Legal Services
 - b) Karrison LLC - Audit Services
 - c) Schulz/Brundage - Operational Insurance
- 3) Maintenance/Utilities
 - a) NICOR Gas - Heat
 - b) Commonwealth Edison - Electric
 - c) AT&T - Phone/Internet
 - d) Groot - Refuse Service
 - e) Village of Lyons - Water & Sewer
 - f) Business Machine Agents - Copier Service
 - g) SMG Security - Alarm System Monitoring
 - h) Sparkle Janitorial - Janitorial Service

Committee Meeting No. 3:

The third meeting of the decennial committee was held on September 21, 2023 with agenda and meeting minutes included in *Appendix 4*. The following topics were discussed during this third meeting:

k) Review of Topics Addressed in Prior Meetings

Summary of topics addressed in previous committee meetings for incorporation into any recommendations on increased accountability and efficiency, and subsequent issuance of final report.

l) Recommendations on Increased Accountability and Efficiency

The Desplaines Valley Mosquito Abatement District provides a vital role in the public health of its residents. The District is a specific purpose entity, which allows full dedication of all its resources to mosquito control operations. It has been influential in the physical development of the western suburbs of Chicago by controlling the development of both nuisance and vector mosquitoes since 1927.

Mosquito related problems and mosquito demographics have changed drastically since the District's formation. While development often reduces sources of nuisance mosquitoes, it creates a completely new set of mosquito sources through the addition of stormwater catch basins, both on-road and off-road, and water retention/detention ponds. The District maintains the ability to adapt operations to meet the changing needs of mosquito control.

West Nile Virus was introduced to our area in 2001, and the District expanded operations to combat this new mosquito-borne disease. The District established a rigorous West Nile Virus surveillance program including a mosquito trapping/testing protocol to specifically locate "hotspots" of West Nile Virus activity, and implement additional mosquito larval control measures and/or localized contingency adult mosquito control operations to minimize disease transmission to humans. Data compiled by the Cook County Department of Public Health assessed the responses by all mosquito abatement districts to the subsequent West Nile Virus epidemic in our area during 2002. The effectiveness of our District's programs to minimize human cases of West Nile Virus in its area is shown in *Appendix 10*.

New mosquito species, in particular *Aedes albopictus*, have been found in the District's gravid trap network in increasing numbers in recent years. This species was previously only found in warmer climates, being unable to survive our cold winters. This species has evolved, and now over-winters in our area. This species is fully capable of disease transmission, and its role will most likely be established within the next few years. This will most likely add a new dimension to our mosquito control operations, and the District will adapt to any new dimension as it has to others in the past.

Technology and new product development have allowed our operations to increase in efficiency, with the use of a smaller workforce. Conventional broad-spectrum insecticides used decades ago have been replaced with environmentally-friendly products with mode of action specific to mosquitoes with no effect on non-target insects. The introduction of long-term growth regulator insecticides has created longer “treatment windows” in the inspection/treatment cycle of mosquito breeding sources. The COVID-19 pandemic in 2020 necessitated a drastic change in personnel utilization by the District. Previous operations requiring 2-person crews were replaced with single member crews and expanded usage of long-term products. Operations adapted out of necessity, but allowed for the establishment of a revised approach to our mosquito larval operations still retained in the post COVID-19 period.

From an efficiency standpoint, the District operates at the highest level of efficiency as physically possible. At this point in time, no recommendations can be made to increase operational efficiency. The District has proven to have the capability to adapt to any new mosquito-related problems, and retains this capability to address any future problems.

From an administrative standpoint, the District has followed form in its control operational efficiency. The District’s permanent staff had over 12 employees in its early years, and currently runs at its lowest level of 5 permanent employees. Rather than having single-duty employees, all current permanent employees wear “multiple hats” in their duties and responsibilities. The District has “honed” this approach over the years, and has been successful with no recommendations to increase efficiency in this area.

From a business standpoint, the District maintains a product supply agreement for its primary and most expensive insecticide, and takes advantage of joint purchases with other mosquito abatement districts in other insecticide purchases. The majority of other supply purchases are made through established procurement policies with GSA vendors where possible, to provide the most economical venue to the District.

All records of the District are open to any public inquiries including freedom of information requests. The District maintains a website for information, and serves as a contact point for any residents wanting to use that avenue. District staff also answers any telephone calls directly during business hours, and addresses any resident concerns through that avenue. Being a specific purpose entity, our District does not have layer upon layer of administration or bureaucracy, and is able to address any questions/concerns directly. From an accountability standpoint, no recommendations for improvement are made at this time.

In conclusion, mosquito abatement districts are a special purpose entity whose function is often over-looked or taken for granted. Many feel that mosquito abatement is no longer needed. Mosquito borne disease is still the leading cause of death in the world. Nuisance mosquito annoyance still impacts our quality of life in outdoor activities during the summer months.

While northern Illinois is not the epicenter of global mosquito borne disease, canine heartworm, West Nile Virus, and St. Louis Encephalitis are of concern to our area. The establishment of new mosquito species in our area will add a new dimension to our operations in the near future!

The Desplaines Valley Mosquito Abatement District has impacted, and continues to play a vital role in the public health of its residents.

m) Final Report Issuance

The committee has reviewed the goals of the *Decennial Committees on Local Government Efficiency Act* and has addressed the topics to the best of its ability as required by legislation with summary through the final report as prepared. The 2023 Decennial Committee is hereby dissolved on September 21, 2023.

**Desplaines Valley Mosquito Abatement District
Decennial Committee on Local Government Efficiency Act**

Agenda - Initial Meeting March 16, 2023 (To be held during regular board meeting scheduled on this date)

1. Designation of Committee Members
 - a) Reatha S. Henry, Chair
 - b) Mark S. Azzi, Trustee Member
 - c) Robert E. Holub, Manager
 - d) Appointment of Resident #1
 - e) Appointment of Resident #2
 - f) Appointment of Additional Residents if Applicable

2. District's Establishment/History
 - a) Operational Summary
 - b) Operations Report (2022)

3. Governing Statutes
 - a) Illinois Compiled Statutes (70ILCS 1005/ Mosquito Abatement Districts Act)

4. Ordinances
 - a) Summary of Ordinances

5. Rules
 - a) Procurement
 - b) Ethics
 - c) Credit Card Policy
 - d) Employee Personnel Handbooks
 - e) Operational Division Handbooks

6. Procedures
 - a) Best Management Practices

7. Input from General Public

8. Adjournment

DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT

**Decennial Committee on Local Government Efficiency Act
Minutes of Committee Meeting Held on March 16, 2023**

The first meeting of the decennial committee as required by Public Act 102-1088 was held as part of the regularly scheduled board meeting. The committee meeting was called to order by Ms. Henry at 8:02am. A motion was made by Ms. Henry, seconded by Mr. Azzi, and carried by all present to establish the committee with the following members:

Reatha S. Henry, Chair
Mark S. Azzi, Trustee Member
Robert E. Holub, Manager
Barbara Bailey, Resident
Catherine Keating, Resident

The manager summarized the provisions of the Public Act requiring the formation of this committee. It is the goal of this committee to study the following aspects pertaining to the District with final report to be submitted to the Cook County Board of Commissioners:

- 1) Unit of local government's governing statutes
- 2) Ordinances
- 3) Rules
- 4) Procedures
- 5) Powers
- 6) Jurisdiction
- 7) Shared services
- 8) Intergovernmental agreements
- 9) Interrelationships with other units of local government and the State
- 10) Any other issues pertinent to the unit of local government

The manager provided documentation to all members, and summarized the history of the District and its operations in mosquito control.

The specific Statutes (70ILCS 1005/Mosquito Abatement Districts Act) applicable to our District were supplied to all committee members with general discussion.

The Ordinances typically adopted by the District were reviewed, with recent Budget and Appropriation and Tax Levy Ordinances provided.

The Rules utilized by the District were reviewed. Along with primary Statutes setting the parameters for the District's operations, internal procedures/rules for procurement, ethics, credit card policy, employee personnel handbooks, and specific operational division handbooks were reviewed.

Finally, District procedures were addressed. Operational procedures were reviewed earlier in the meeting, with additional documentation entitled "Best Management Practices" provided to all committee members. This document is part of NPDES permit application material, and provides the exact specifics of our field operations.

Ms. Henry inquired if any additional discussion was desired from committee members and/or general public. A motion was made by Mr. Azzi, seconded by Ms. Keating, and carried by all committee members present to adjourn the meeting at 8:20am.

REATHA S. HENRY

Reatha S. Henry, Committee Chair

Desplaines Valley Mosquito Abatement District
8130 Ogden Avenue, Lyons, IL 60534

Agenda - Decennial Committee Meeting No. 2 - May 18, 2023, 8:00am

1. Record of Committee Members in Attendance
 - a) Vacancy Appointment if Necessary
2. Review of March 16, 2023 Meeting
3. District Powers
 - a) Illinois Compiled Statutes
4. Jurisdiction
 - a) District Boundaries
5. Shared Services
6. Intergovernmental Agreements
 - a) Illinois EPA - Used Tire Collection
 - b) Mosquito Abatement Districts - Altosid Rebates
 - c) Mosquito Abatement Districts - Joint Insecticide Purchases
7. Interrelationships with other units of local government and the State
 - a) Villages within District
 - b) Local Health Departments
 - c) Cook County Department of Public Health
 - d) Illinois Department of Public Health
 - e) Forest Preserve District of Cook County
 - f) Nature Preserves Commission
 - g) Brookfield Zoo
 - h) Other Mosquito Abatement Districts
8. Other Issues
 - a) Product Supply Agreement
 - b) Maintenance Contracts
 - c) Professional Services Contracts
9. Input from General Public
10. Adjournment

DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT

**Decennial Committee on Local Government Efficiency Act
Minutes of Committee Meeting Held on May 18, 2023**

The second meeting of the decennial committee as required by Public Act 102-1088 was held as part of the regularly scheduled board meeting. The committee meeting was called to order by Ms. Henry at 8:01am. Committee members present:

Reatha S. Henry, Chair
Mark S. Azzi, Trustee Member
Robert E. Holub, Manager
Barbara Bailey, Resident
Catherine Keating, Resident

The minutes of the March 16, 2023 decennial committee meeting were reviewed. A motion was made by Mr. Azzi, seconded by Ms. Henry, and carried by all present to approve the committee meeting minutes.

Continuing with the initial list of topics to be reviewed by the committee, the powers of the District were reviewed. The manager referenced the specific Statutes (70ILCS 1005/Mosquito Abatement Districts Act) which provide in detail the powers of the District and board of trustees to conduct mosquito abatement operations. The District's powers are limited to those provided by statute. The District is required to report to the Illinois Department of Public Health (IDPH), which has disciplinary authority to the statutory powers.

The jurisdiction of the District was reviewed. The physical boundaries of the District define the jurisdiction of the District with regard to the service area of the District. Specific statutes within the Mosquito Abatement Districts Act outline procedures to expand and/or reduce the District's service area. The District also has statutory authority to contract with other entities to provide mosquito abatement services, with this serving as a potential to expand jurisdiction.

Shared services were reviewed next. Mosquito control operations are very specific to the local geography/composition of any given area. Mosquito demographics can and do vary greatly within a short distance. Hence mosquito control operations must be capable to address this variance, and is the reason individual mosquito abatement districts exist. Shared physical mosquito control operations cannot be successful from a logistical perspective, however from a support perspective shared services are practiced. Our District does combine insecticide purchases with other Districts to take advantage of bulk pricing and maximum product rebates. Our District maintains a network of

surveillance traps to determine mosquito population levels, and disease vector levels present within the District. This information is shared with local, county, state health departments, and other mosquito abatement districts. In addition the Brookfield Zoo along with Villages are included in this information loop as applicable to their specific area.

The District maintains several intergovernmental agreements within its operations. These include:

a) Illinois EPA - Used Tire Collection

The District routinely collects fly-dumped tires throughout the District. The tires provide a significant source of vector mosquitoes, and elimination is the most efficient method of mosquito control. Collected tires are brought to District headquarters, and in turn are disposed through the State EPA Used Tire Collection Program

b) Mosquito Abatement Districts - Altosid Rebates

Altosid products are only sold through agency pricing, however manufacturer rebates are available based on level of product purchased. All Districts who use this product have an agreement with Central Life Sciences to allow individual purchases to be combined to meet and receive the highest rebate level possible.

c) Mosquito Abatement Districts - Joint Insecticide Purchase

Our District combines its other insecticide product purchases with other Districts to take advantage of volume pricing.

The District maintains close interrelationships with other units of local government and the State which include:

- a) Villages within District
- b) Local Health Departments
- c) Cook County Department of Public Health
- d) Illinois Department of Public Health
- e) Forest Preserve District of Cook County
- f) Nature Preserves Commission
- g) Brookfield Zoo
- h) Other Mosquito Abatement Districts

The District maintains a vital role in the public health of its residents, and the interrelationships with other entities is essential to the success of the District's mosquito control activities. The manager reviewed the specifics.

Finally, other issues pertinent to the District and its ability to perform mosquito control operations were reviewed. In particular, three categories were addressed with specifics reviewed by the Manager:

- a) Product Supply Agreement
- b) Maintenance Contracts
- c) Professional Services Contracts

Ms. Henry inquired if any additional discussion was desired from committee members and general public. Subsequently, a motion was made by Ms. Keating, seconded by Ms. Bailey, and carried by all committee members present to adjourn the meeting at 8:20am.

REATHA S. HENRY

Reatha S. Henry, Committee Chair

**Desplaines Valley Mosquito Abatement District
8130 Ogden Avenue, Lyons, IL 60534**

Agenda - Decennial Committee Meeting No. 3 - September 21, 2023, 8:00am

1. Record of Committee Members in Attendance
 - a) Vacancy Appointment if Necessary
2. Review of Topic Addressed in Prior Meetings
3. Recommendations on Increased Accountability and Efficiency
4. Input from General Public
5. Final Report Issuance
6. Dissolution of Decennial Committee upon Adjournment
7. Adjournment

DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT

**Decennial Committee on Local Government Efficiency Act
Minutes of Committee Meeting Held on September 21, 2023**

The third meeting of the decennial committee as required by Public Act 102-1088 was held as part of the regularly scheduled board meeting. The committee meeting was called to order by Ms. Henry at 8:01am. Committee members present:

Reatha S. Henry, Chair
Mark S. Azzi, Trustee Member
Robert E. Holub, Manager
Barbara Bailey, Resident
Catherine Keating, Resident

The minutes of the May 18, 2023 decennial committee meeting were reviewed. A motion was made by Mr. Azzi, seconded by Ms. Henry, and carried by all present to approve the committee meeting minutes.

The manager reviewed topics addressed during prior meetings for incorporation into any recommendations on increased accountability and efficiency. The District has adapted to changing mosquito problems since its formation in 1927. The introduction of West Nile Virus into our region in 2001, with subsequent epidemic the following year, added a new dimension to District operations. A review of human case data by the Cook County Department of Public Health clearly shows the effectiveness of the District's control programs in place minimizing human West Nile Virus cases among its residents.

The introduction of new mosquito species to our area will create additional challenges to our operations in the near future. As in the past, the District is prepared to address any challenges presented.

Technology has provided additional tools for the District to utilize in its operations. In particular, long term growth regulator insecticides have allowed operations to be conducted with fewer personnel.

From an efficiency standpoint, the District operates at the highest level of efficiency as physically possible with no recommendations for change.

From an administrative standpoint, the District currently operates at its lowest staff level since its formation, yet maintains its highest level of mosquito surveillance and control operations. No recommendations for change in this category are made.

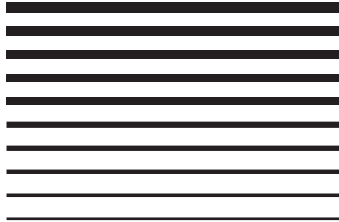
From a business standpoint, the District maintains product supply agreements and takes advantage of joint purchases with other mosquito abatement districts. The District utilizes the most economical venue in this category, with no recommendations for change.

Finally, all records of the District are open to the public. The District maintains a website, and staff answers any phone calls directly to address resident concerns. Being a specific purpose entity, the District does not have a layer upon layer of administration or bureaucracy. From an accountability standpoint, no recommendations for improvement are made at this time.

A proposed draft of the decennial committee report with incorporation of the topics addressed during the current meeting was reviewed. Ms. Henry inquired if any additional discussion was desired from committee members and general public. With no further discussion, general consensus was that the goals of the decennial committee have been met. A motion was made by Ms. Keating, seconded by Ms. Bailey, and carried by all committee members to formally adopt the draft copy of the decennial report, and to dissolve the decennial committee upon adjournment at 8:18am.

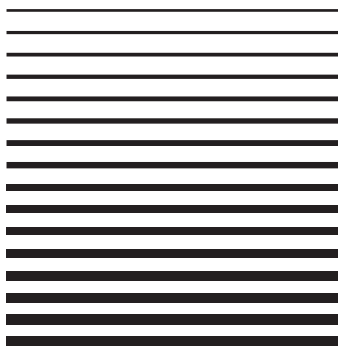
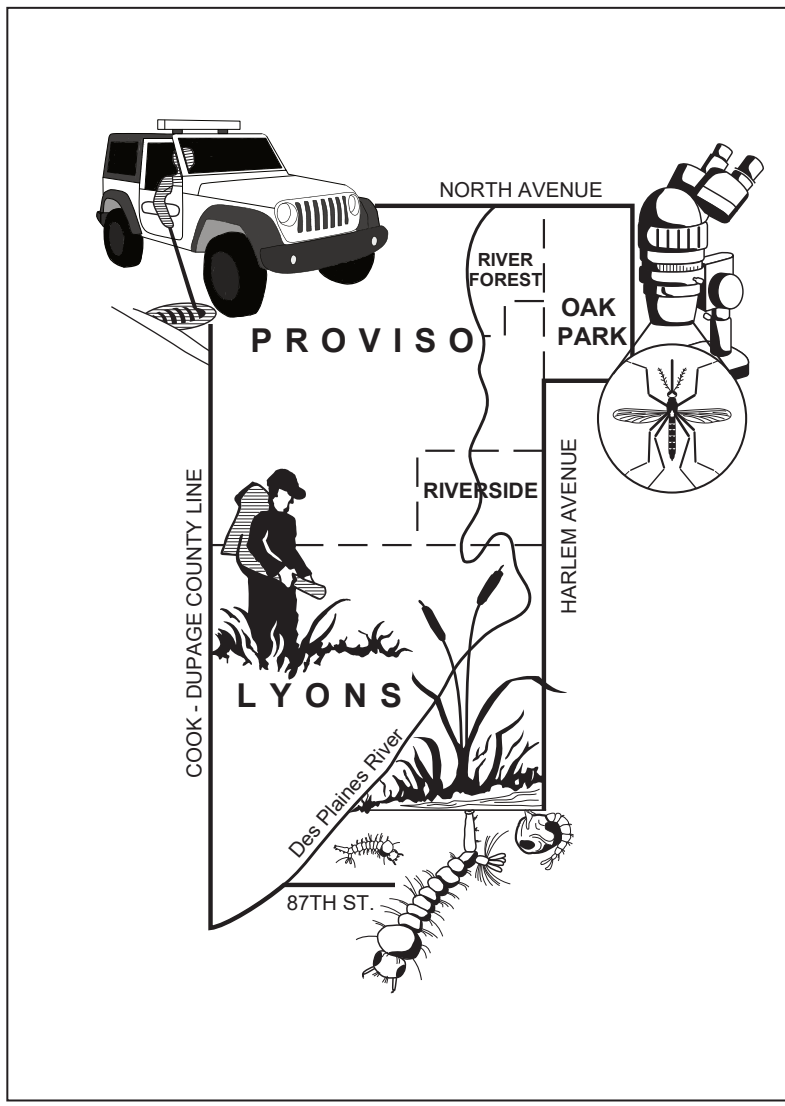
REATHA S. HENRY

Reatha S. Henry, Committee Chair



Desplains Valley
Mosquito Abatement District

2022 OPERATIONS REPORT



**NINETY FIFTH
OPERATIONS REPORT ON MOSQUITO CONTROL
2022
DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT**

Trustees

Reatha S. Henry
Thomas F. Geselbracht
Mark S. Azzi
vacant

President
Vice President
Secretary/Treasurer
Assistant Secretary

Staff

Robert E. Holub - Manager
Brian J. Duffy - Asst. Manager

William O. Medlock - Chris N. Solik – Mark C. Tomek

Report Prepared By

Robert E. Holub
Brian J. Duffy
Mark C. Tomek

2022 OPERATIONS REPORT ON MOSQUITO CONTROL DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT

Table of Contents

President's Letter	i
Introduction	1
Area and Organization	1
Mosquito-Borne Diseases	2
Surveillance	4
Weather Surveillance	4
Mosquito Surveillance and Identification	5
Disease Vector Surveillance	8
Larval Mosquito Control	11
Source Inspection & Larval/Pupal Control.....	11
General Larval Operations.....	11
Street Catch Basin & Off-Road Basin (ORB) Operations	12
Physical Source Reduction & Maintenance	13
Tire Collection & Disposal.....	13
Drainage & Ditch Cleaning	14
Adult Mosquito Control	14
Residential Adult Mosquito Control.....	14
Other District Activities	15
Public Education	15
Database and District Maps	16
Winter Activities.....	16
Help Fight Mosquitoes	Back Cover

BOARD OF TRUSTEES
REATHA S. HENRY
THOMAS F. GESELBRACHT
MARK S. AZZI



Desplaines Valley

Mosquito Abatement District

8130 OGDEN AVE., P.O. BOX 31
LYONS, ILLINOIS 60534-0031

TELEPHONE 708-447-1765

MANAGER
ROBERT E. HOLUB

December 2, 2022

Dr. Sameer Vohra, Director
ILLINOIS DEPARTMENT OF PUBLIC HEALTH
535 W. Jefferson Street
Springfield, IL 62761-0001

Dr. Vohra:

Presented herewith is the 95th report summarizing mosquito control operations of the Desplaines Valley Mosquito Abatement District during 2022 to fulfill requirements specified by Illinois Statute.

COVID-19 pandemic protocol established in 2020 continued this year with operations adapted to provide our services while maintaining the safety of our residents and employees. The District's monitoring and control of vector mosquitoes involved in West Nile Virus (WNV) transmission to humans was our priority and effectively completed as in past years.

The District continued to monitor WNV activity within the adult *Culex pipiens/resutans* mosquito population with the PCR test platform. A total of 2,355 pools were tested this year. Regional WNV amplification within the adult mosquito population occurred in late July through August with contingency adult control measures utilized as necessary in those areas to supplement primary larval control operations.

The *Aedes albopictus* mosquito has firmly established its presence throughout our District over the past few years. Due to the potential disease transmission capability of this mosquito, monitoring continued during 2022.

The Desplaines Valley Mosquito Abatement District routinely maintains an aggressive larval control program against both *nuisance* and *vector* mosquitoes. Control operations started in April and continued into early October with a variety of measures as described in detail within this report.

Respectfully submitted,

A handwritten signature in cursive script that reads "Reatha S. Henry". The signature is written in black ink and is positioned above the printed name.

Reatha S. Henry
President, Board of Trustees

OPERATIONS REPORT FOR 2022

Introduction

The concept of mosquito abatement is often misunderstood by the general public. More often than not, the public's perception of mosquito abatement is a truck driving up and down streets dispersing aerosol insecticide. All other functions are wrongfully deemed as secondary or of minimal significance in the public's eye. The goal of this report is to rectify these misconceptions by providing background information on the District, mosquitoes in our area, and control activities. Control activities are defined by priority, and include a summary of methods, products, and quantities utilized.

Area and Organization

The Desplains Valley Mosquito Abatement District encompasses a 77 square mile area of the Des Plaines River and Salt Creek valley in the western suburbs of Chicago, Illinois. This area is bound by the Cook-DuPage county line on the west, North Avenue on the north, 87th Street/Des Plaines River on the south, and Harlem Avenue on the east except in Oak Park where Austin Boulevard is the eastern boundary. The District is comprised of Lyons, Oak Park, Proviso, Riverside, and River Forest townships and includes thirty-one villages. The District expanded to its current size in late 1999 with the annexation of territory in southern Lyons Township.

The District is intersected from north to south by the Des Plaines River and in the southern quarter by the Sanitary Drainage and Ship Canal. Other waterways include three major creeks flowing into the Des Plaines River and 4.5 miles of ponded water of the defunct Illinois and Michigan Canal. Property composition is estimated as 73 percent residential, 18 percent industrial, 8 percent Forest Preserves, and 1 percent rural or undeveloped.

The Desplains Valley Mosquito Abatement 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 mosquito abatement districts formed under this Act. The District was initially established to control nuisance mosquitoes, primarily *Aedes vexans* (Meigen) which were produced annually from predominant lowland plains and marshes. However, as more knowledge was attained about specific species and their direct link to disease transmission established, this new dimension of disease vector control was added to the purpose of mosquito abatement. Currently, both nuisance and vector control operations are carried out by the District. Since its inception, the District's control measures have undoubtedly been influential in the residential and industrial growth of the area.

The District is administered by a five member Board of Trustees who are appointed by the Cook County Board for four year terms as provided by Illinois statute. The trustees serve without compensation. Five full-time employees comprise the permanent staff. During the summer months, up to sixteen seasonal employees are employed.

Operations are financed totally from a tax on real estate within the five townships of the District. The District operates on an annual appropriation for the fiscal year from May 1 through April 30, and according to law is authorized to levy taxes up to and including 0.025 per hundred dollars of assessed valuation for its general corporate fund. For the past ten years, the total tax rate has averaged 0.014, well below this maximum, with a rate of 0.014 experienced for funds collected during 2022. Financial information is summarized in a separate report prepared by an independent auditor at the close of each fiscal year.

Mosquito-Borne Diseases

Several species of mosquito are capable of transmitting diseases to humans. Mosquito-borne diseases have been a serious, destructive force around the world throughout history. In northern Illinois, two primary diseases are of concern to the District. These are West Nile Virus (WNV) and St. Louis Encephalitis (SLE). WNV and SLE are closely related with details in following sections.

Three other encephalitis viruses carried by mosquitoes are also found in Illinois. These are LaCrosse Encephalitis (LAC), Western Equine Encephalitis (WEE), and Eastern Equine Encephalitis (EEE). At this time, these viruses are not considered a serious problem in northern Illinois. Parasitic malaria, once a serious cause of disease in Illinois, is also not considered as a potential problem. Finally, canine heartworm is transmitted by mosquitoes and is a current problem in the state.

West Nile Virus (WNV)

WNV was first discovered in the United States in New York City during 1999. It has since spread south and west with confirmation in northern Illinois during 2001. In 2002, an epidemic of WNV in Illinois resulted in 884 human cases of the disease with 66 deaths. WNV is caused by a virus that cycles between mosquitoes and birds, with occasional spill-over into humans and other mammals. The virus can have a high mortality in certain bird species while having little effect on other bird species. Crows and Blue Jays are extremely susceptible to the virus, as are eagles, hawks, and other raptors. Humans are considered a dead-end host for the virus, which cannot be transmitted from person to person. WNV affects the central nervous system causing an inflammation of the brain. Most human infections are mild and subclinical (not diagnosed). Symptoms associated with mild cases of WNV are low fever, headache, body aches, and swollen lymph glands. Less than 1% of people infected with WNV will develop severe illness. In more severe cases, symptoms can be high fever, neck stiffness, muscle weakness, stupor, coma, tremors, paralysis, and in 3-15% of severe human infections, death. People over 50 are most susceptible to WNV, but all ages are at risk.

Mosquitoes from the genus *Culex*, in particular the species *Culex pipiens*, are the vector of WNV from birds to humans. These mosquitoes deposit their eggs in raft clusters of 50-400 eggs directly on the water's surface. They are most abundant in periods lacking rainfall, when areas of stagnant water prevail. They are well adapted to many habitats including curbside storm water catch basins, off-road storm water catch basins, discarded tires, buckets & other artificial containers, rain gutters, bird baths, unused swimming pools, ditches, ponds, etc. Anywhere that water can stand for more than a week can become a potential breeding source for *Culex* mosquitoes. The adult mosquito is a non-aggressive biter with feeding primarily confined to evening or night hours. The adult mosquito does not travel far from its source with a typical flight range from a few blocks to under 2 miles. The *Culex* mosquitoes can have many over-lapping generations each season, and over-winter as adults.

St. Louis Encephalitis (SLE)

As with WNV, SLE is caused by a virus that cycles between mosquitoes and birds, with occasional spill-over into humans and other mammals. Humans are considered a dead-end host for the virus, which cannot be transmitted from person to person. Unlike WNV, the virus has little effect on birds that are infected. SLE affects the central nervous system causing an inflammation of the brain. Most human infections are subclinical (mild and not diagnosed) exhibiting flu-like symptoms. More severe cases can exhibit high fever, nausea, headache, personality changes, paralysis, and in 2-20% of the severe cases, death. The elderly are most susceptible to SLE. An epidemic of SLE within Illinois occurred in 1975, with a few cases reported in the 1980's and 1990's.

The mosquitoes that transmit (vector) SLE are the same as WNV, with description under that category.

Other Encephalitis Viruses

LaCrosse Encephalitis (LAC) is caused by a virus that cycles between mosquitoes and small mammals as chipmunks and ground squirrels. Humans are considered a dead-end host. LAC is endemic in Illinois with 5-15 cases per year, primarily occurring in local foci in central and northwestern regions of the state. The majority of LAC cases are mild and subclinical. Less than 1% fatality occurs in cases severe enough to be diagnosed. Children under the age of 16 are most susceptible to this virus. As with other mosquito-borne encephalitis, LAC cannot be transmitted from person to person. The eastern tree hole mosquito, *Ochlerotatus triseriatus* (formerly *Aedes*

triseriatus) is the vector of this disease. This mosquito normally develops in water filled rot cavities in trees (tree holes), but has adapted well to many man-made habitats as discarded tires, buckets, and other artificial containers. The *Ochlerotatus triseriatus* adult mosquito lays its eggs singly on the inside wall of the tree hole or artificial container just above the waterline. The adult mosquito is an aggressive biter with feeding all day long, and generally stays within the vicinity of its source. The *Ochlerotatus triseriatus* has one generation each season, and over-winters in the egg stage.

Western Equine Encephalitis (WEE) is similar to SLE, cycling between birds and mosquitoes with rare spill-over to the human population. WEE primarily affects horses, and is typically found west of the Mississippi River, but has also been found in Illinois. Human cases severe enough to be diagnosed can have a 2-5% fatality. The primary vector of WEE is *Culex tarsalis*, and possibly *Culex pipiens*. The *Culex tarsalis*, like other *Culex*, lay eggs in rafts directly on the water's surface. The mosquito can be found in sunlit sources with high organic content as ditches and artificial containers. The mosquito seldom travels more than 1 mile from its source, however has been known to travel up to 10 miles. This species has continuous generations each season, and over-winters as adults.

Eastern Equine Encephalitis (EEE) is another virus that cycles between birds and mosquitoes with horses and humans as dead-end hosts. Human infections of EEE can range from mild to severe, with 50-75% of diagnosed severe cases resulting in death. Fortunately, human cases of EEE are rare with only 150 cases throughout the United States from 1964-1998. No human cases of EEE have been reported in Illinois, although the virus has been found regularly in bird populations. The primary vector of EEE is *Coquillettidia perturbans*, a mosquito found in wetlands. They lay their eggs in rafts directly on the water's surface. The mosquito is an aggressive biter, strong flier, and feeds during the evening or night. This species usually has one generation each season, and over-winters as larvae attached to the stems of cattails or similar aquatic plants.

Other Mosquito-Borne Diseases

Malaria is a disease caused by a protozoan parasite transmitted from person to person via the mosquito. At one time, malaria was prevalent in Illinois, with concentration in the southern part of the state. Mosquito control efforts in the 1920's have eliminated the risk of malaria in Illinois, although the mosquito which carries the disease, *Anopheles quadrimaculatus*, is still found in the area.

Dengue and Yellow Fever are both diseases caused by viruses that are transmitted by mosquitoes. They are common in the Caribbean, South America, Asia, and Africa, but are unlikely to occur in Illinois.

Canine (Dog) Heartworm is a disease affecting dogs that is transmitted by mosquitoes. It is caused by a roundworm, *Dirofilaria imitus*. The *Culex pipiens* and possibly *Aedes vexans* are the vectors in our area. The disease is ongoing and best controlled by prevention. Veterinarians typically prescribe drugs to prevent the roundworm larvae development in dogs.

Chikungunya virus (CHIK-V) virus is typically not fatal, however causes high fever with severe joint pain lasting from several weeks to months. The virus is spread by *Aedes aegypti* and *Aedes albopictus* which are prevalent in the southeast regions of the United States. This area is currently under watch for the virus.

Zika virus. *Aedes aegypti* is the primary carrier, but *Aedes albopictus* is a secondary carrier. Both species are typically found in warm climates. Only 1 in 5 people who are infected with the virus will show symptoms and most will recover within a week. No locally transmitted cases have occurred in Illinois. While the effect of the Zika virus in adults is mild, the real concern is its potential effect on the development of babies in infected pregnant women.

HIV and Coronavirus in Mosquitoes

Mosquito-borne viruses must be able to multiply and infect the salivary glands of the mosquito. This does *not* occur with some viruses such as HIV and coronavirus. Mosquitoes are *not* a factor in HIV and coronavirus transmission.

Surveillance

Weather Surveillance

The weather is the most dominating factor affecting mosquito production. All mosquitoes spend their larval and pupal stages of development in water, consequently rainfall is critical to their existence. In addition, temperature governs their rate of development and is a secondary variable in their life cycle. Over forty species of mosquito are found within Illinois, and each has environmental conditions best suited to its development. The *Aedes vexans* and *Culex pipiens* with related species are the primary mosquitoes found within the District. In general, heavy rains followed by warm temperatures create the potential for a major population of the floodwater annoyance mosquito, *Aedes vexans*. In contrast, dry conditions creating areas of “stagnant” water are ideal for prolific production of many vector-related mosquitoes as *Culex pipiens* and related species.

The District monitors all relevant weather parameters with equipment at its headquarters in Lyons, IL. Weather data is also obtained from the National Weather Service based at O’Hare Airport directly north of the District. All weather data is correlated to District mosquito control operations.

Temperature

The following table summarizes temperature data for 2022 from the National Weather Service and DVMAD:

	Normal Temperature - O’Hare (Deg F)	O’Hare Temperature (Deg F)	Deviation from Normal (Deg F)	Dvmad Temperature (DegF)
April	48.9	47.0	-1.9	47.3
May	59.1	63.6	+4.5	64.2
June	68.9	72.6	+3.7	73.2
July	74.0	75.3	+1.3	76.0
August	72.4	74.4	+2.0	74.2
September	64.6	67.4	+2.8	66.9

Rainfall

The following table summarizes rainfall data for 2022 from the National Weather Service:

	Normal Rainfall (Inches)	O’Hare Rainfall (Inches)	Deviation from Normal(Inches)
April	3.38	5.31	+1.93
May	3.68	3.47	-0.21
June	3.45	2.66	-0.79
July	3.70	4.50	+0.80
August	4.90	2.05	-2.85
September	3.21	2.20	-1.01

In addition, recording rain gauges were operated at various locations within the District to reflect localized rainfall conditions. Respective rainfall data is summarized in the following table:

Localized Rainfall Totals (Inches)							
	Berkeley	LaGrange Park	Lyons	River Forest	Justice	Willow Springs	O'Hare
April	----	----	3.00	----	----	----	5.31
May	2.11	1.93	2.46	2.52	3.54	2.05	3.47
June	1.94	2.20	1.93	2.91	1.98	1.96	2.66
July	4.89	5.35	3.96	6.93	4.55	4.52	4.50
August	2.20	2.92	1.39	2.78	3.59	4.93	2.05
September	3.88	3.44	2.30	5.06	1.86	2.58	2.20

Mosquito Surveillance and Identification

Larval and adult mosquito surveys are the base of our control program and are conducted on a regular basis to determine the extent, type, and concentration of mosquito populations within the District. The surveys are essential to the coordination and success of all control measures.

Larval Surveillance

Larval samples are the most basic, whereby potential mosquito breeding sources are inspected regularly within a 14 day period. Larval samples are taken from sites found breeding, and are identified by the laboratory staff to species. All potential sources are marked on permanent maps and numbered for reference. Individual source histories are maintained on computerized records.

Adult Surveillance

Adult mosquito populations within the District are monitored by the use of light traps, gravid traps, gravid aedes traps, and a CO2 baited BG-Sentinel Trap. During 2022, eight New Jersey light traps with the capability to make unattended, individual collections over weekends were utilized. The light traps were operated from dusk to dawn nightly during the period of May 13 to October 10. Collections were made each morning, Monday through Friday, with all samples classified by the laboratory staff as to genera, species, and sex.

A comparison of the 2019-2022 species classification of adult female mosquitoes is summarized in the table on pg. 6. In addition, daily mean counts for *Aedes vexans* and *Culex* species from eight light traps are graphically shown on pg. 7 Figure 1 and Figure 2. The District uses the William’s mean number of female adults per trap to summarize *Aedes vexans* and *Culex* species light trap data. The William’s mean is calculated by taking the mean of the trap count’s logarithms, and then taking the antilog of that mean. This method reduces the influence of any single trap with extreme data, and hence more accurately represents the true majority of light trap data.

Introduced Species

Ochlerotatus japonicus was first discovered in the District in 2008 and now is commonly found in the area. This mosquito can develop in a variety of habitats, natural and artificial, including woodland pools and discarded tires. *Ochlerotatus japonicus* is capable of transmitting St. Louis encephalitis, Eastern Equine Encephalitis, West Nile Virus, Chikungunya, and Dengue.

Aedes albopictus was first discovered in the District in 2016 and has been found in increasing numbers over the past few mosquito seasons. This mosquito develops in natural and artificial containers, such as cavities in trees and discarded tires, and usually does not fly more than one half mile from its development site. In addition, *Aedes albopictus* is a very aggressive day biter and is capable of transmitting Chikungunya, Dengue, Zika, and West Nile Virus. The establishment and spread of this mosquito has been observed in the District and the expectation is for further expansion. In 2022, a total of 45 male and 203 female *Aedes albopictus* mosquitoes were collected utilizing the following traps: New Jersey Light, Gravid, Gravid Aedes and BG-Sentinel.

Desplaines Valley Mosquito Abatement District

Comparison of Light Trap Data - Adult Female Mosquitoes				
	2019	2020	2021	2022
Aedes/Ochlerotatus				
Oc. atropalpus	0	3	0	0
Oc. canadensis	2	1	0	0
Oc. grossbecki	1	1	0	0
Oc. hendersoni	1	0	0	0
Oc. japonicus	150	227	124	41
Oc. sollicitans	1	0	5	3
Oc. sticticus	41	164	62	19
Oc. stimulans	0	0	2	0
Oc. triseriatus	28	36	44	36
Oc. trivittatus	1,041	202	1718	123
Ae. albopictus	0	0	0	3
Ae. cinereus	0	0	9	0
Ae. vexans	22,586	11,510	41,226	21,854
Anopheles				
barberi	32	1	2	0
punctipennis	299	156	328	212
quadrimaculatus	74	78	140	47
walkeri	4	5	1	0
Coquillettidia				
perturbans	145	629	163	74
Culex				
erraticus	58	142	436	17
pipiens/restuans	8,172	6,494	8,145	5605
salinarius	3	0	0	1
tarsalis	9	19	8	8
territans	232	596	772	240
Culiseta				
inornata	28	117	13	5
melanura	0	1	0	0
minnesotae	3	4	2	0
Orthopodomyia				
signifera	6	13	10	7
Psorophora				
ciliata	3	6	3	5
columbiae	0	0	3	2
ferox	10	1	28	5
howardii	0	0	1	0
Uranotaenia				
sapphirina	945	2,479	2113	366
TOTALS:	33,886	22,885	55,358	28,673
Number of Nights:	153	158	143	150

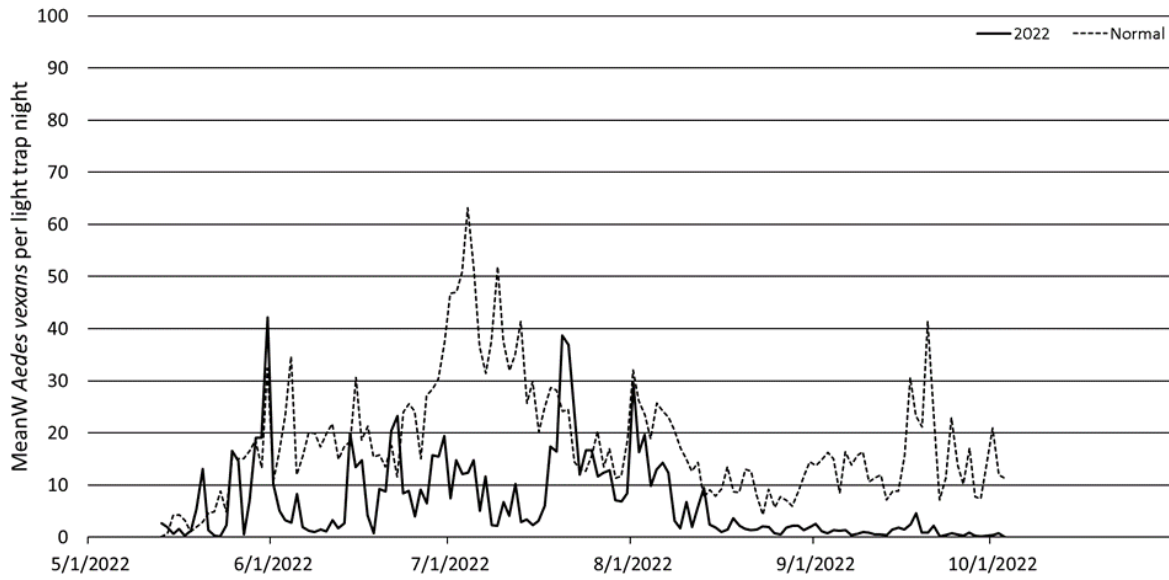


Figure 1. Female *Aedes vexans* William’s mean number mosquitoes per light trap night.

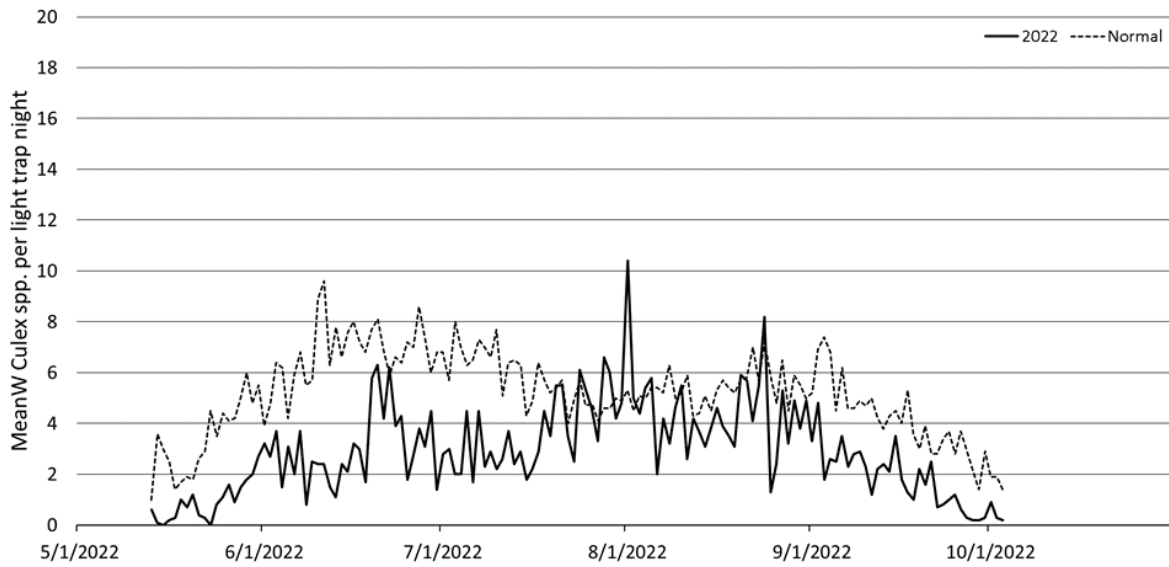


Figure 2. Female *Culex* spp. William’s mean number mosquitoes per light trap night.

Disease Vector Surveillance

Gravid Traps

Gravid traps are specialized traps that collect live gravid adult female mosquitoes, primarily *Culex* species. Gravid mosquitoes are female mosquitoes that have taken a blood meal and are ready to lay eggs. Because they have taken at least one blood meal, it is more likely that they have been exposed to WNV or SLE. The District uses gravid traps to sample the adult female *Culex* mosquito population to test for the presence of disease viruses. In 2004, the state legislature passed Senate Bill SB2879 that requires Mosquito Abatement Districts to test mosquitoes for the presence of mosquito borne diseases and to report positive results to the local health department within 24 hours. The District has been in compliance since the 2002 mosquito season. The District currently uses 18 gravid traps evenly distributed throughout the District. The samples from these traps were tested in-house with the RT-PCR test as described in the next section.

Real Time PCR Test for WNV & SLE

In-house testing of the adult mosquito population for the presence of WNV and SLE began in 2002. Testing allows determination of the infection rate within the vector mosquito population for these diseases. The infection rate combined with vector population levels determine the potential for occurrence, amplification, and spill-over into the human population of these viruses.

In 2020, the District switched from the RAMP (Rapid Analyte Measurement Platform) to RT-PCR (Real Time Polymerase Chain Reaction) system to perform West Nile Virus testing of mosquito samples.

RT-PCR can detect virus at much lower levels, allowing for earlier detection and more accurate infection rates. This is done by amplifying any virus that may be present in samples to detectable and quantifiable levels. In addition, RT-PCR allows for more flexibility in testing for other viruses, a variety of options for testing materials, and a lower cost per test. Following is a table that summarizes the RT-PCR results:

A summary of 2022 RT-PCR results for WNV For 18 Gravid Traps (Pools contain up to 50 female <i>Culex spp.</i> mosquitoes)			
Week Of	Total Pools	RT-PCR	
		# Positive	% Positive
5/16 – 5/22	19	0	0.0%
5/23 – 5/30	33	0	0.0%
5/31 – 6/05	53	0	0.0%
6/06 – 6/12	77	0	0.0%
6/13 – 6/20	105	2	1.9%
6/21 – 6/26	101	3	3.0%
6/27 – 7/04	138	5	3.6%
7/05 – 7/10	135	3	2.2%
7/11 – 7/17	159	14	8.8%
7/18 – 7/25	182	38	20.9%
7/26 – 7/31	153	74	48.4%
8/01 – 8/07	196	121	61.7%
8/08 – 8/14	177	136	76.8%
8/15 – 8/21	198	149	75.3%
8/22 – 8/28	150	112	74.7%
8/29 – 9/05	141	110	78.0%
9/06 – 9/11	88	58	65.9%
9/12 – 9/18	116	56	48.3%
9/19 – 9/25	63	25	39.7%
9/26 – 10/02	23	7	30.4%
10/03 – 10/10	24	2	8.3%

Eighteen gravid traps were used to monitor *Culex* population levels. Figure 3 summarizes the William’s mean number of gravid females per gravid trap for 2022. The William’s mean is calculated as previously described. Figure 4 represents the weekly average of gravid females collected per gravid trap night.

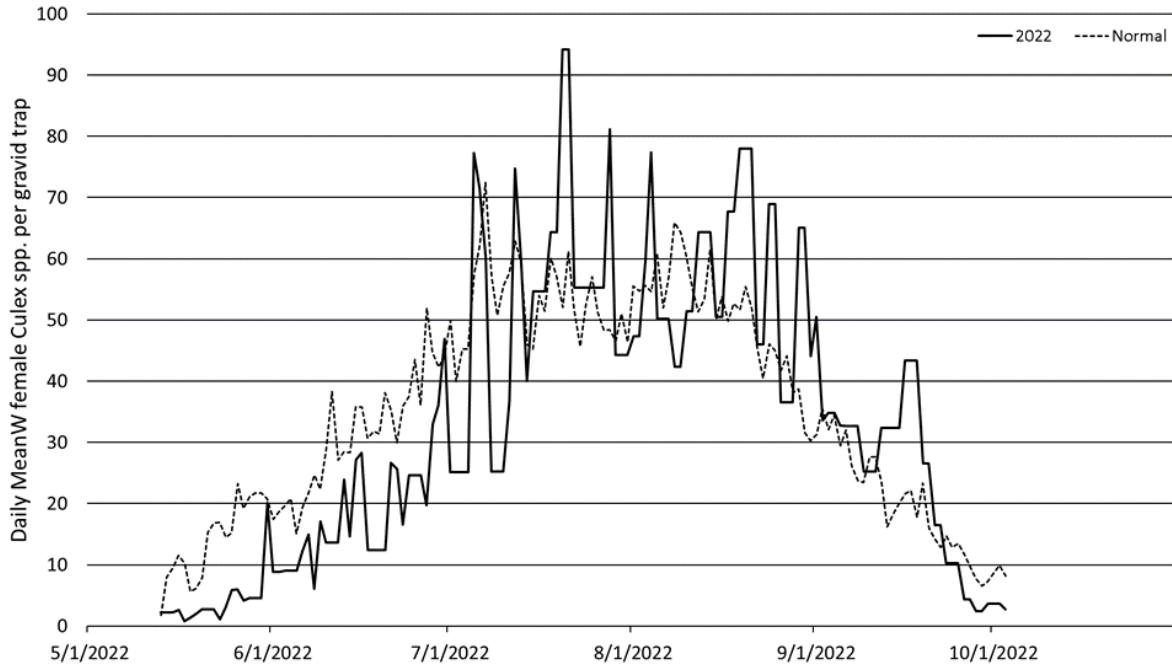


Figure 3. Female *Culex spp.* William’s mean number mosquitoes per gravid trap night.

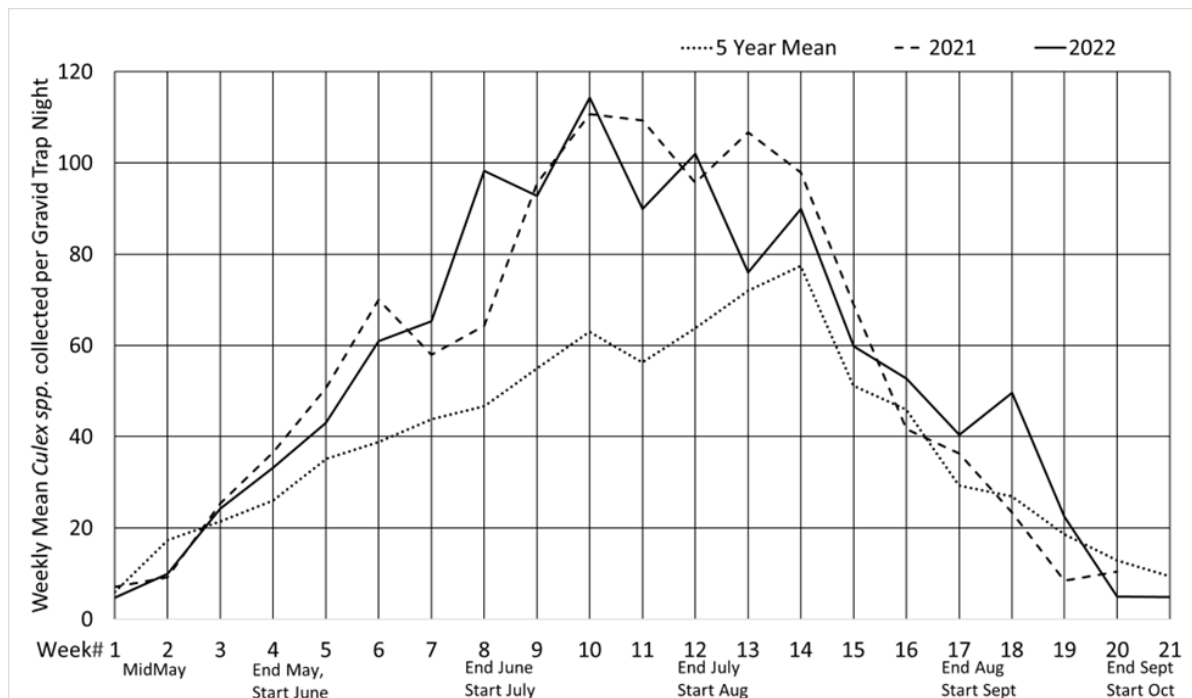


Figure 4. Weekly average number of female *Culex spp.* mosquitoes collected per gravid trap night. Week 1 began 5/13/22 and week 20 ended 10/10/22.

Shown below are Minimum Infection Rate (MIR) and Vector Index graphs. The MIR is the minimum number of infected mosquitoes per 1000 mosquitoes tested. MIR is calculated by dividing the number of positive pools by the total number of mosquitoes tested in those pools. This number assumes that the minimum number of 1 mosquito per pool is positive. The weekly MIR is represented in Figure 5. Vector Index is the relation between the average mosquitoes collected per trap night and MIR to determine the minimum positive mosquitoes collected per trap night. The Vector Index is shown in Figure 6. In both graphs week 1 began 5/13/22 and week 20 ended 10/10/22.

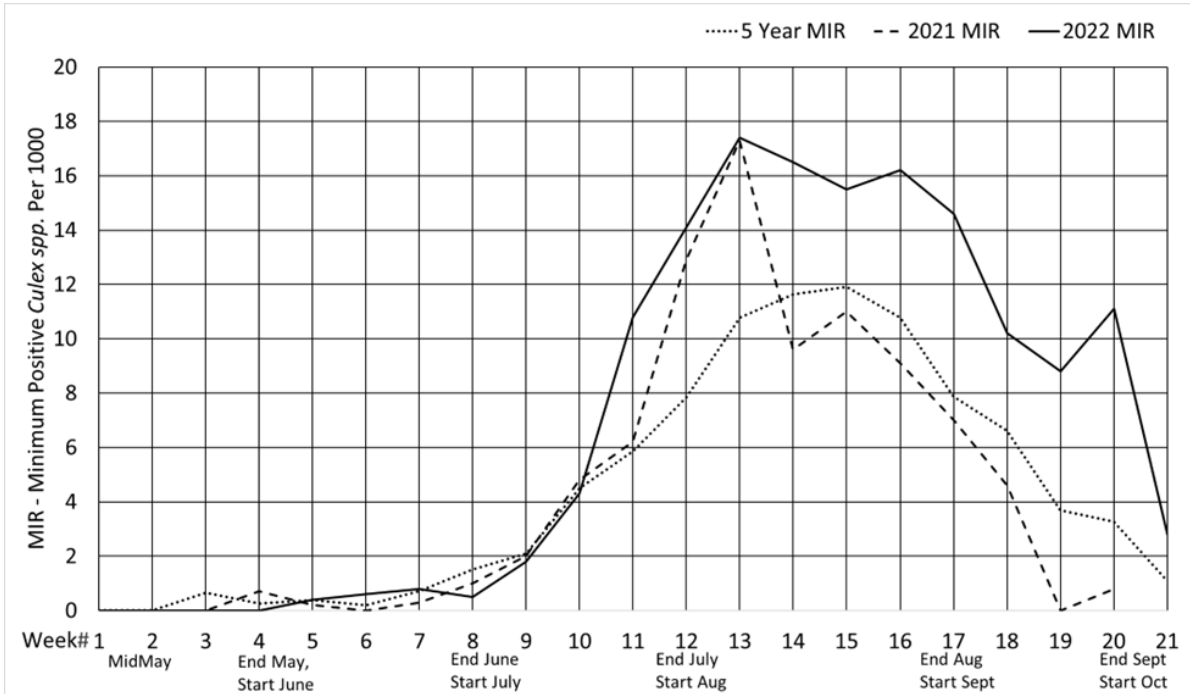


Figure 5. Minimum number of WNV infected mosquitoes per 1000 mosquitoes tested.

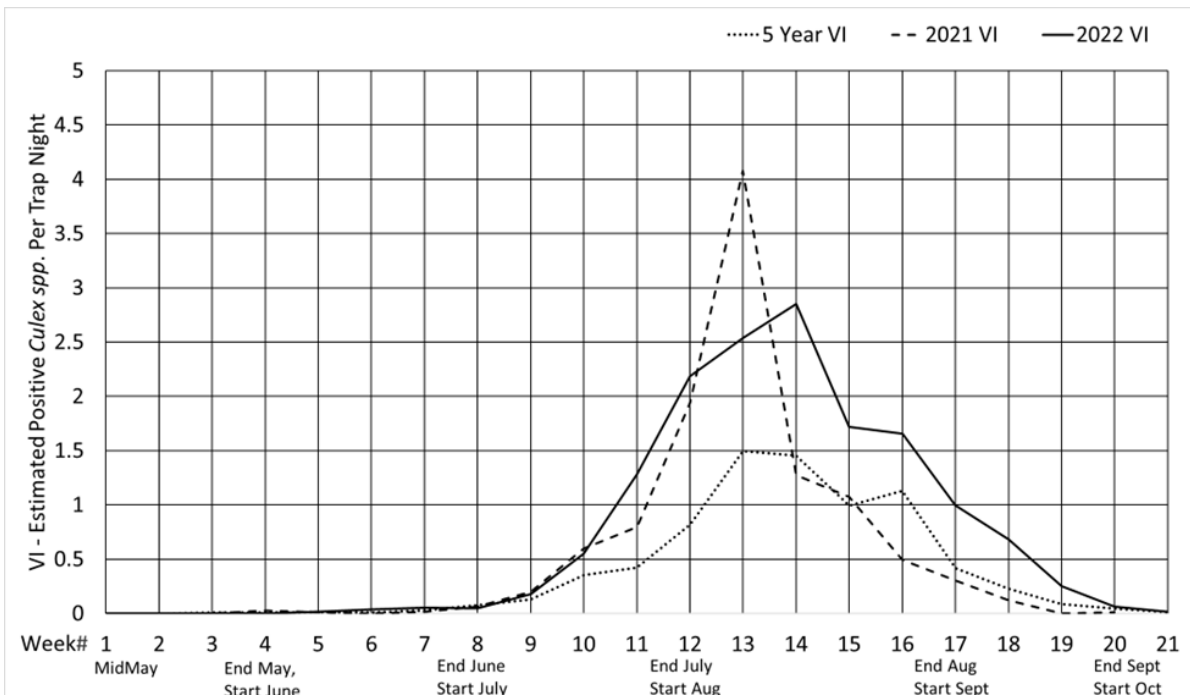


Figure 6. Vector Index is the estimated number of WNV positive mosquitoes collected per trap night.

Larval Mosquito Control

The mosquito, an insect, has four distinct stages in its life cycle: egg, larva, pupa, and adult. During the larval/pupal stages, mosquitoes are confined to water and as such are localized and concentrated in numbers. Once mosquitoes reach the adult stage, they become dispersed and difficult to effectively control. Hence, the primary mosquito control efforts utilized by the Desplaines Valley Mosquito Abatement District focus on larval/pupal control and/or source elimination. This approach allows mosquitoes to be controlled in the most efficient, environmentally safest, and with the most economical methods available. All control methods are accepted and recommended in guidelines established by the Illinois Department of Public Health, and are continuously evaluated by the District to ensure desired goals. The respective aspects of this approach encompass the following:

- a) Source Inspection & Larval/Pupal Control with Insecticides - Chemical and Biological
 - General larval division
 - Street catch basin division
 - Off-road catch basin division
- b) Physical Source Reduction & Maintenance
 - Tire collect/disposal
 - Drainage
 - Public Education

Source Inspection & Larval/Pupal Control with Insecticides - Biological & Other

The District's source inspection and larval/pupal control program is the most comprehensive measure utilized. Potential mosquito breeding sources within the District range from roadside ditches, catch basins, retention ponds, swamps, marshes, and creeks, to extensive flood plains. However, any place where water may remain for 10-14 days becomes a potential mosquito source. Hence, known sources are inspected within this interval to ensure desired control goals before mosquitoes reach the adult stage.

Source inspection and larval/pupal control measures are categorized into three distinct operations: general larval, street catch basin, and off-road catch basin. General larval operations include all potential sources with the exception of catch basins, which due to their number and density within the District warrant separate consideration. These operations are summarized respectively in the remainder of this category.

General Larval Operations

The District has over 2,300 non-catch basin sources including ditches, retention ponds, tires & artificial containers, swamps, creeks, and extensive flood plains. The District is divided into sections with numerous sub-sections. The District typically utilizes one and two-member crews with motorized and hand equipment for larval/pupal control for general larval operations. The crews are responsible for inspecting potential breeding sites within their area and applying appropriate insecticide only to those sources where mosquito breeding is actually found. Crews collect data on source condition, breeding density, larval samples, any treatment required, etc. All data collected is entered into the District's computer system to compile a source history. Data collected is also used by teams conducting post-treatment inspections to verify insecticide and operational effectiveness.

With the COVID-19 pandemic, general larval crews were reduced to single members with expanded use of insect growth regulator products to maintain desired larval control measures with a reduced staff.

With the arrival of WNV in Illinois and its potential impact on bird populations, area zoos have been confronted with the need to protect their exotic bird collections. The Chicago Zoological Society's Brookfield Zoo is located within the District. The Brookfield Zoo and the District continue the cooperative effort to control vector mosquitoes on their property. The District routinely addresses catch basins and out-of-exhibit sources on Zoo property. The District also inspects and treats sources within exhibits that are accessible without the need to remove animals from the area. Zoo personnel address sources that require removal of animals.

During 2022, the District utilized one form of biological insecticide, three forms of an insect growth regulator, and one degradable oil insecticide in various aspects of its general larval/pupal control program. The biological

insecticide is derived from the bacterium, *Bacillus thuringiensis israelensis*, commonly known as BTI. The active ingredient in BTI derived insecticides is an extract (crystal toxin) of fermented cultures, which is ingested by mosquito larvae. BTI is selective against mosquito and blackfly larvae only, and is deemed as one of the environmentally safest insecticides available for mosquito larval control. BTI is not effective against mosquito pupae since they do not feed during this stage of their life cycle. Hence a light surface oil, commonly known as larvicide oil, was used on all sources where pupae were present in large numbers.

The insect growth regulator, commonly known as IGR, consists of methoprene. Methoprene does not control larvae by direct toxic action, but interferes with the physiological processes associated with the mosquito's metamorphosis. Thus, the larvae are prevented from changing into and emerging as an adult mosquito. The District used a pellet form and two briquet forms of methoprene.

All products were applied as recommended and are approved for mosquito control use by the United States Environmental Protection Agency. The District's policy of insecticide application remained the same as in previous years, requiring treatment of only those waters actually found to contain mosquito larvae/pupae. With the exception of IGR application, the District does not utilize a pre-hatch treatment program, ie. treatment of water in anticipation of future mosquito breeding.

A summary of 2022 general larval operational data						
	Mar/April	May	June	July	Aug	Sep/Oct
Granular BTI (1)	----	1214	885	1714	709	1073
Larvicide Oil (2)	----	0.3	6.0	6.0	2.0	3.6
Altosid Pellets (3)	----	1415	1762	1251	1424	372
Altosid 30-day Briq.(4)	----	8	----	----	24	8
Altosid XR Briq. (5)	----	65	84	----	----	----

(1) Vectobac G BTI (lbs.) as produced by Valent Biosciences with an application rate of 10-20 lbs./acre.
 (2) BVA-2 Larvicide Oil (gal) as produced by BVA Oils with an application rate of 1-2 gal/acre
 (3) Altosid pellets IGR (lbs.) as produced by Wellmark International with an application rate of 5 lbs./acre.
 (4) Altosid 30-day Briquets IGR (pcs) produced by Wellmark International with an application rate of 1 per 100 square feet.
 (5) Altosid XR Briquets IGR (pcs) produced by Wellmark International with an application rate of 1 per 100 square feet.

Street Catch Basin & Off-Road Basin(ORB) Operations

The storm water catch basin is the primary source of breeding for the *Culex pipiens/restuans* species of mosquitoes. The District contains over 42,000 catch basins situated in streets, alleys, and parking lots as well as over 7,200 catch basins in off-road areas. These basins allow water to drain from required areas during periods of rainfall. Most catch basins by design have a "sump" to prevent debris from entering the drainage pipe. This "sump" also retains water, making the catch basin ideal for mosquito production. Their regular inspection and treatment as necessary is a routine part of our larval/pupal control program.

Due to the varied location of catch basins within the District, control operations are categorized into on-road basins (accessible by vehicle) and off-road basins (inaccessible by vehicle). As in general larval/pupal control operations, the District is divided into sections with numerous sub-sections. Catch basins are treated throughout the season with a combination of slow release Altosid 30-day Briquets and Altosid XR Briquets (150-day) with an application rate of one briquet per basin. During the 2022 season, on-road catch basins were treated with Altosid 30-day Briquets for the first and second rounds, followed with Altosid XR Briquets for the final round. Follow-up post treatment inspection of on-road catch basins has shown that actual residual control of Altosid products was less than stated label intervals under normal field conditions where basins are flushed by rainfall events. The two applications of 30-day briquets followed by a round of XR briquets ensured acceptable season-long control in on-road catch basins. Due to technical issues with the Districts' Jeep Wranglers, treatment was accomplished with the use of 3 pickup trucks with two person crews. The trucks were equipped with a PVC application tube to reach the basin without requiring the passenger to leave the vehicle. Off-road catch basins were treated with XR briquets two times. This treatment combination obtained the desired long-term control and

accommodated the physical difficulty in reaching many of these basins. Treatment required a person to walk from basin to basin with manual application of briquets.

In recent years, new development and the re-development of existing areas have resulted in dramatic increases in numbers of both on-road and off-road catch basins. Off-road basins, cataloged and treated since 1987, have increased at the greatest rate. Operations have expanded annually to accommodate treatment requirements of the additional catch basins.

A summary of 2022 catch basin data								
Month	# of Street Basins Treated	# 30-day Briq.(1)	# of XR Briq.(2)	# WSP Packet(3)	# of Off-road Basins Treated	# 30-day Briq.(1)	# of XR Briq.(2)	# WSP Packet(3)
April	----	----	----	----	----	----	----	
May	20,038	19,475	551	12	2,797	61	2,714	22
June	43,630	42,268	1,284	78	4,489	172	4,288	29
July	39,650	17,391	22,109	150	4,966	51	4,806	20
August	20,389	213	20,081	95	833	91	720	22
Sep/Oct	194	173	----	21	86	70	----	16

(1) Altosid 30-day Briquets IGR (pcs) produced by Wellmark International with an application rate of 1pc./basin.
 (2) Altosid XR Briquets IGR (pcs) produced by Wellmark International with an application rate of 1pc./basin.
 (3) Altosid WSP (water soluble pouch) produced by Wellmark International with an application rate of 1 pouch/basin.

Frequently, small quantities of different larval control formulations are tested to evaluate their efficacy and how they might fit into our general larval and catch basin programs. No formulations were evaluated in 2022.

Physical Source Reduction & Maintenance

Tire Collection & Disposal

Abandoned vehicle tires have become a major source of mosquito production in recent years. With the introduction of used tire recycling fees by dealers, people often choose to dispose of old tires themselves. With the discovery that used tires will not be collected with regular refuse, an increased number of “fly-dumped” tires have appeared in the District.

Many of the species of mosquito that develop in tires are known to be potential vectors of disease. Tires are difficult to treat because they tend to be scattered in small numbers, often in hard-to-reach areas. In addition, the treatment of discarded tires with larvicide is not only labor intensive, but has limited effectiveness when tires are in random piles. Areas that have abandoned tires are not only unsightly, but tend to attract further dumping of old tires.

The collection and proper disposal of discarded tires is by far the best way to control mosquito production in this type of source. It is a permanent solution that costs less in the long run over other alternatives. Other benefits to this solution include reduced use of pesticides, removing unsightly debris, and discouraging further accumulation of discarded tires.

In March, 1996, the District obtained a Waste Tire Transporter license from the Illinois Environmental Protection Agency (IEPA) to allow for the transport of discarded tires collected within the District. During 2022, the District collected 367 fly-dumped tires. Tires are stored inside, out of the elements, until enough are collected to send off to be recycled. The District will continue to collect discarded tires within its service area in the future.

Drainage & Ditch Cleaning

Source reduction, or the physical removal of mosquito breeding areas, is the only permanent method of mosquito control. However, it is usually the most difficult and expensive, and is often controversial in an urbanized area because the resulting land improvement may profit an individual along with the public. Source reduction is also controversial because drainage of an area may affect non-target organisms and wildlife. The District therefore limits physical source reduction to areas where it will do the most public good and continues its basic policy of not draining permanent ponds and of limiting ditches to the slow drainage of temporary waters within a 5-7 day period.

Urbanization often alters source reduction progress as a prolific breeding site may be filled or paved eliminating one problem while producing another. Construction may block a natural or existing drainage ditch, which would require re-routing of the drainage system, or might even create an entirely new breeding area where none had previously existed. The District is constantly on the alert for this type of situation, and attempts to correct the situation before it becomes a problem. The District requests all individuals, industries, and municipalities to cooperate with the District to correct mosquito breeding areas that have been inadvertently created by their actions.

Adult Mosquito Control

The District does not conduct routine adult control operations. Adult control is the least effective approach to mosquito control with only localized, temporary benefits. However, adult control is the *only tool* available to use against an adult mosquito population which is involved in a disease transmission cycle. Hence, the District will only implement residential adult control operations as a contingency measure for vector related mosquitoes.

The ultra-low volume insecticide aerosol application process as initiated in 1971 is utilized in any adult control operations. All truck mounted equipment utilized by the District is equipped with automatic flow control which directly regulates insecticide application to vehicle speed, thus ensuring accurate application rates. Adult control operations are conducted only when environmental constraints of ambient air temperature between 65-85°F and average wind speeds in the 2-8 mph range are satisfied to optimize effectiveness.

Residential Adult Mosquito Control

The District considers guidelines established by the Illinois Department of Public Health (IDPH) in their publication entitled "IDPH Surveillance and Response Procedures for Mosquito-borne Arbovirus Emergencies" and the Center for Disease Control in consideration of residential adult mosquito control operations. Operations will be focused against specific vector populations of *Culex pipiens* and related species in an effort to minimize or break a viral transmission cycle.

During 2022, criteria in the referenced guidelines were met for West Nile Virus (WNV) to initiate residential adult mosquito control operations. Specific criteria considered are the following:

Primary Triggers

- a) *Positive Mosquito Pools* - Confirmation of viral activity within the adult mosquito population. Our District operates a network of gravid traps to collect adult mosquito samples for subsequent testing of WNV & SLE. These traps are highly selective in collecting *Culex species* mosquitoes having had a blood meal and potential exposure to WNV or SLE. In-house testing using the RAMP and RT-PCR systems, gives immediate results.
- b) *Surrounding Area Data* - Viral activity in areas surrounding the district, including data from other Mosquito Abatement Districts, Cook County Department of Public Health, and DuPage County Health Department.
- c) *Dead Birds* - Numbers of dead birds and the time of year they are found. Subsequent confirmation by the IDPH of WNV within the dead birds.
- d) *Time of Season* - The point in any given mosquito season when *initial* positive bird and mosquito pool samples are confirmed. Positive samples early in the season set the stage for a developed viral amplification /transmission cycle, whereas initial positive samples late in the season would minimize this cycle.
- e) *Equine Cases* - Confirmed equine cases are an indicator that a spillover from the bird population has occurred. Viral activity has amplified and escalated to a level where this occurs.

f) *Human Cases* - Confirmed human cases or fatalities are the ultimate indicator that a spillover from the bird population has occurred, and is likely to continue.

Secondary Triggers

- a) *Vector Population Level* - A larger than normal vector population level poses a greater risk for spillover disease transmission to humans. But a low vector population does not imply that disease transmission will be minimal or disappear. Under the circumstances of a high infection rate, spillover transmission *will* occur even with a low vector population.
- b) *Weather: Rain & Temperature* - Rainfall can directly affect vector population levels. Water is required for all mosquito development, with rainfall influencing the number of potential breeding sources. Temperature on the other hand can affect *both* vector population levels and the viral amplification/transmission cycle. Above normal temperatures also can increase the viral transmission rate.

WNV activity was high throughout the District during 2022. Above normal temperatures throughout the summer combined with an extremely dry August allowed for the amplification of WNV to reach the levels experienced this year. Approximately 50% of the District was sprayed for adult mosquitoes one time. A second round of treatment was conducted for about 10% of the District, and a third and fourth round of treatment was completed for 5% of the District where WNV activity remained elevated. A total of 462 linear miles of residential streets were treated in 2022.

Respective data for all adult mosquito control measures is summarized as follows:

	April	May	June	July	Aug	Sept	Oct
Duet ULV (2)	---	---	---	---	132	16	---
(1) Duet Dual-Action sumithrin/prallethrin (in gal) manufactured by Clarke Mosquito Control Products with appl. rate 0.0066 ai lbs./acre.							

Other District Activities

Public Education

The combined efforts of any mosquito abatement program cannot succeed without the assistance of the public. Consequently, keeping the public informed of the mosquito’s life cycle and the simple steps they can take to eliminate potential breeding sources around the home is an essential part of our program.

The District internet web site was established in 2006 to provide thorough and up-to-date information for the residents of the District. It includes general information on mosquitoes and their control as well as steps the public can take to protect themselves from mosquito annoyance and potential disease transmission. The web site, along with social media, provides the date and locations of any planned contingency residential adult mosquito control operations. A news section gives residents timely updates on current conditions and reminders of the ways they can help protect themselves and those around them. The site is found at www.desplainsvalleymad.com.

During the 2022 mosquito season, news reports appeared on village web sites, and in village newsletters outlining the steps homeowners can take to control mosquito development on their property as well as information about the operations of the District. The distribution of informational pamphlets about the District and mosquito-borne diseases to village hall offices, libraries, public requests, and by field crews was placed on hold during 2022 due to the COVID-19 pandemic. The sale of rain barrels by villages to residents in an effort to reduce the amount of water entering the storm water system has been increasing in recent years. Our handout for the proper maintenance of rain barrels to prevent mosquito development in them, continues to be distributed with newly purchased rain barrels in cooperation with villages within the District.

The District annually receives numerous inquiries and requests from the public. Each inquiry is handled on an individual basis. This form of informational assistance has proven to be one of the most effective methods in public education.

Database and District Maps

Through the course of a year, the District's laboratory generates large amounts of data. In 1985, the District began using a computer database to store and retrieve that data in meaningful ways.

Data collected by the District, since 1980, is stored in a computer database. This data consists of weather and other environmental data, mosquito population surveillance data, and actual larval/adult control information. From this data inspection and treatment reports can be generated, providing field personnel with information about what control measures should be initiated. It can also evaluate the success of those efforts.

Because of the District's ability to access large amounts of information very quickly, the data can be evaluated in a timely way. This has enhanced the District's ability to execute mosquito control efforts as safely, efficiently, and economically as possible.

A variety of computer-generated maps are utilized to best manage and treat the different types of mosquito sources located throughout the District. These maps help guide crews to different areas throughout the District in an efficient and safe manner. District maps are updated frequently throughout the mosquito, and non-mosquito season.

In 2018, Geographic Information System (GIS), using open-source software, was introduced into the District's program. GIS is designed to store, retrieve, manage, display and analyze all types of geographic and spatial data. Since the 2018 mosquito season, the locations of over 7,200 off-road catch basins, and a small percentage of street catch basins throughout the District were plotted with tablet computers using this system. GIS will allow for more efficient and thorough treatments of these basins going forward.

During the 2022 season the District began using handheld GPS devices in the general larval division to plot mosquito breeding sources. More than half of the District's sources were plotted in 2022 and the plotting of sources will continue in 2023. Using the handheld GPS device to locate sources will greatly increase efficiency, especially for newly hired seasonal employees.

Winter Activities

The District owns and maintains all of its vehicles and equipment. During the winter months when weather conditions prohibit outside work, all equipment is cleaned, checked, and repaired as needed. Vehicles and equipment that are no longer economically feasible to operate are replaced. All new replacement vehicles/equipment must be adapted to meet the District's requirements. Consequently, the winter months provide an ideal opportunity for such an undertaking. Major shop and building maintenance programs are also carried out in the winter months by District personnel, who have the capability to maintain all of our equipment, building, and grounds.

The winter season is also the time for updating maps of mosquito breeding sources, inspecting problem drainage areas, planning for next season's drainage projects, finalizing the records of the previous season, and the annual training of all permanent personnel.

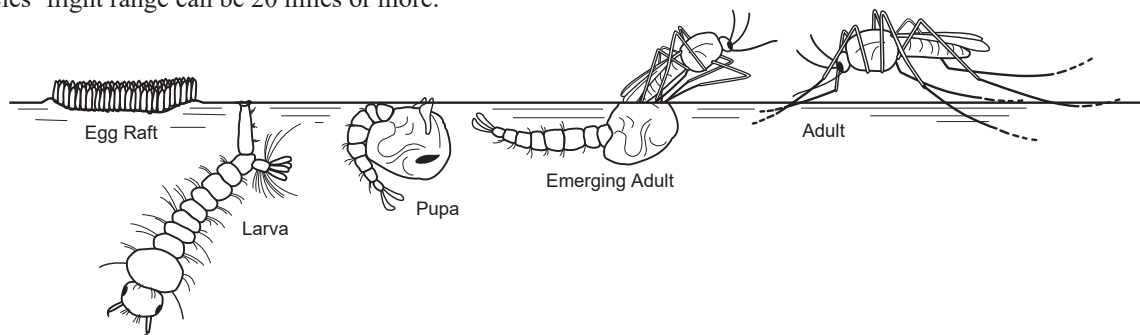
The District continues to comply with the regulatory requirements set forth by the United States and Illinois Environmental Protection Agencies (USEPA and IEPA). The USEPA and IEPA require the District have a National Pollutant Discharge Elimination System (NPDES) permit to conduct mosquito control operations. The District's permit is current, and a report of pesticide usage is submitted annually to the IEPA. In addition, the winter season is used to evaluate our control methods in order to remain compliant with these requirements.

Help Fight Mosquitoes

It's a fact... mosquitoes develop in water.

Over 40 different species of mosquito occur within Illinois. Each species has its own developmental habitat, however 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 3–5 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.



Here's what you can do...

It doesn't take much water for mosquitoes to develop. Many potential breeding sites can be found around the home. You can take the following simple steps to eliminate potential sources:

- Throw away all trash that can hold water (cans, jars, tires, etc).
- Clean rain gutters and downspouts to prevent water from standing in gutters 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 your property free of grass clippings, garbage, and other debris to insure proper flow of water.
- Screen rain barrels with 16-mesh screen to prevent adult mosquitoes from depositing eggs on the water's surface.
- Stock ornamental ponds with goldfish or other surface-feeding fish to control mosquito production.
- Clean out and fill tree holes.
- Stack pails, barrels, tubs and similar containers upside down.



Eliminate any place where water can stand and...

you eliminate mosquitoes!

Information maintained by the Legislative Reference Bureau

Updating the database of the Illinois Compiled Statutes (ILCS) is an ongoing process. Recent laws may not yet be included in the ILCS database, but they are found on this site as Public Acts soon after they become law. For information concerning the relationship between statutes and Public Acts, refer to the Guide.

Because the statute database is maintained primarily for legislative drafting purposes, statutory changes are sometimes included in the statute database before they take effect. If the source note at the end of a Section of the statutes includes a Public Act that has not yet taken effect, the version of the law that is currently in effect may have already been removed from the database and you should refer to that Public Act to see the changes made to the current law.

SPECIAL DISTRICTS (70 ILCS 1005/) Mosquito Abatement District Act.

(70 ILCS 1005/0.01) (from Ch. 111 1/2, par. 73.990)

Sec. 0.01. Short title. This Act may be cited as the Mosquito Abatement District Act.

(Source: P.A. 86-1324.)

(70 ILCS 1005/1) (from Ch. 111 1/2, par. 74)

Sec. 1. Any contiguous territory having a population of not less than 300 inhabitants and no part of which is already included in a mosquito abatement district may be organized as a mosquito abatement district in the following manner:

Any 5% of the legal voters within the limits of the proposed mosquito abatement district may petition the circuit court for the county in which such territory lies, to order the question whether such territory shall be organized as a mosquito abatement district under this Act to be submitted to the legal voters of such territory, but every petition shall be signed by at least 25 legal voters residing within the territory proposed to be organized as a mosquito abatement district, and in case such territory includes more than one city, village or incorporated town, or any portions thereof, or includes one or more cities, villages or incorporated towns, or any portion thereof and territory not a part of any city, village or incorporated town, then such petition must be signed by at least 5% of the legal voters residing in each of the said cities, villages, or incorporated towns, or portions thereof, and by at least 5% of the legal voters residing in the territory not a part of any city, village or incorporated town. Such petition addressed to the court shall contain a definite description of the boundaries of the territory proposed to be organized as a mosquito abatement district, and shall set forth the name of the proposed district, which name shall be The.... Mosquito Abatement District.

(Source: P.A. 81-1489.)

(70 ILCS 1005/2) (from Ch. 111 1/2, par. 75)

Sec. 2. Upon the filing of such a petition in the office of the circuit clerk the court to whom the petition is addressed shall give notice of the time and place of a hearing on the question of the necessity for the organization of such a district and of the boundaries of such district. The notice shall be published at least once each week for 2 weeks in one or more newspapers of general circulation in the proposed district, and a copy of the notice shall be posted in at least 10 of the most public places in the district at least 10 days before the hearing. The hearing shall be held within 20 days after the petition is filed with the circuit clerk.

The court shall preside at the hearing, and all persons resident within the territory proposed to be organized as a mosquito abatement district shall be given an opportunity to be heard touching the necessity of the organization of such a

district and to make suggestions regarding the boundaries of the district. After hearing the statements, evidence and suggestions if the court determines that considerations of public health and welfare make the organization of such a district necessary it shall fix the boundaries of the proposed mosquito abatement district and for that purpose and to that extent it may alter and amend the petition. In case the boundaries as fixed by the court include any territory not included in the boundaries as described in the original petition, the court shall cause a notice to be inserted at least twice in some newspaper of general circulation in the additional territory, which notice shall state the time and place at which a hearing will be held to permit the owners of the land in the additional territory to appear and be heard on the question of including the additional territory. The notice shall be published at least 10 days before the hearing, and the hearing shall be held within 3 weeks after the court first fixes the boundaries. At the hearing the boundaries of the proposed district shall be finally fixed by the court.

(Source: P.A. 76-1373.)

(70 ILCS 1005/3) (from Ch. 111 1/2, par. 76)

Sec. 3. The determination of the court as to the necessity for the organization of the proposed mosquito abatement district, together with the description of the boundaries of such district as fixed by such court, shall be entered of record in the court. Thereupon the court shall certify the question of the organization of the territory included within the boundaries fixed by it as a mosquito abatement district to the proper election officials who shall submit the question to the legal voters resident within such territory at an election to be held in the district. Notice of such referendum shall be given and the referendum conducted in the manner provided by the general election law. The notice of such election shall state the purpose of the referendum, describe the territory proposed to be organized as a mosquito abatement district, and state the time of such election.

The proposition shall be in substantially the following form:

```
-----  
    Shall this territory (describing          YES  
it) be organized as The ..... -----  
Mosquito Abatement District?                NO  
-----
```

The court shall cause a statement of the result to be entered of record in the court.

(Source: P.A. 90-655, eff. 7-30-98.)

(70 ILCS 1005/4) (from Ch. 111 1/2, par. 77)

Sec. 4. If a majority of the votes cast on the question are in favor of the organization of the territory as a mosquito abatement district such territory shall thenceforth be deemed an organized mosquito abatement district under this Act. The district so organized shall have the name set forth in the petition and by such name may transact all corporate business. Such district shall constitute a body corporate and politic and exercise the powers herein prescribed. All courts of this State shall take judicial notice of the organization of the said mosquito abatement district.

(Source: Laws 1927, p. 694.)

(70 ILCS 1005/5) (from Ch. 111 1/2, par. 78)

Sec. 5. Within 60 days after the organization of any mosquito abatement district under the provisions of this Act a

board of trustees, consisting of 5 members, for the government and control of the affairs and business of such mosquito abatement district shall be appointed in the following manner:

(1) If the district lies wholly within a single township, the board of trustees of that township shall appoint the trustees for the district but no township official is eligible for such appointment;

(2) If the district is not contained wholly within a single township, but is located wholly within a single county, the trustees for the district shall be appointed by the presiding officer of the county board with the advice and consent of the county board;

(3) If the district lies wholly within a municipality, the governing body of the municipality shall appoint trustees for the district;

(4) If the district does not conform to any of the foregoing classifications, the trustees for the district shall be from each county in the district in numbers proportionate, as nearly as practicable, to the number of residents of the district who reside in each county in relation to the total population of the district. Trustees shall be appointed by the county board of their respective counties, or in the case of a home rule county as defined by Article VII, Section 6 of the Illinois Constitution, by the chief executive officer of that county with the advice and consent of the county board.

Upon the expiration of the term of a trustee who is in office on the effective date of this amendatory Act of 1975 or at the time of the publication of each decennial Federal census of population, the successor shall be a resident of whichever county is entitled to such representation in order to bring about the proportional representation required herein, and he shall be appointed by the appointing authority of that county. Thereafter, each trustee shall be succeeded by a resident of the same county who shall be appointed by the same appointing authority. Of the trustees thus appointed 3 shall hold office until the second Monday in December after the next succeeding general election for members of the General Assembly and 2 shall hold office until the second Monday in December, 2 years after the next succeeding general election for members of the General Assembly, and until their successors are appointed and qualified. Thereafter the trustees of the district shall be appointed in every year in which the term of any of the trustees expires and shall hold office for 4 years and until their successors are appointed and qualified. Each trustee shall be a legal voter in the district, and such trustees shall serve without compensation.

Whenever a vacancy occurs in the board of trustees the appropriate appointing authority shall appoint some person to fill the remainder of the unexpired term.

(Source: P.A. 82-783.)

(70 ILCS 1005/6) (from Ch. 111 1/2, par. 79)

Sec. 6. The trustees appointed in accordance with the foregoing provisions shall constitute a board of trustees for the mosquito abatement district for which they are appointed, and such board of trustees is declared to be the corporate authority of said district and shall exercise all of the powers and control all of the affairs and property of such district. Such board of trustees may provide and adopt a corporate seal. Immediately after their appointment and at their first meeting in December of each year thereafter the board of trustees shall elect one of their number as president, one as secretary, and one as treasurer, and shall elect such other officers as may be necessary. The board of trustees shall provide for the time and

place of holding its regular meetings, and may establish rules for its proceedings. Special meetings may be called by the president of the board or by any three trustees, but each member of the board shall be given notice of such special meeting at least three hours prior thereto. All of the meetings of such board, whether regular or special, shall be open to the public. A majority of the board of trustees shall constitute a quorum but a smaller number may adjourn from day to day. Said board shall keep a regular book of records of all of the proceedings of said board, which book shall be open to the inspection of any person residing in said district at all reasonable and proper times.

(Source: Laws 1927, p. 694.)

(70 ILCS 1005/7) (from Ch. 111 1/2, par. 80)

Sec. 7. The board of trustees of such district shall have power to take all necessary or proper steps for the extermination of mosquitoes, flies or other insects within the district, and, subject to the paramount control of the municipal or other public authorities, to abate as nuisances all stagnant pools of water and other breeding places for mosquitoes, flies or other insects within the district; to purchase such supplies and materials and to employ such labor and assistants as may be necessary or proper in furtherance of the objects of this Act, and if necessary or proper, in the furtherance of the same, to build, construct and thereafter to repair and maintain necessary levees, cuts, canals or channels upon any land within the district, and to acquire by purchase, condemnation or other lawful means, in the name of the district, any necessary lands, rights of way, easements, property or material requisite or necessary for any such purpose; to make contracts to indemnify or compensate any owner of land or other property for any injury or damage necessarily caused by the exercise of the powers of this Act conferred or arising out of the use, taking or damage of such property for any such purposes, and generally to do any and all things necessary or incident to the powers hereby granted and to carry out the objects specified herein.

(Source: Laws 1927, p. 694.)

(70 ILCS 1005/7.1) (from Ch. 111 1/2, par. 80.1)

Sec. 7.1. Sale of personal property.

Whenever any mosquito abatement district owns any personal property which in the opinion of three-fourths of the members of the board of trustees is no longer necessary or useful to, or for the best interests of the district, such a majority of the board of trustees then holding office, at any regular meeting or at any special meeting called for that purpose, by ordinance may authorize the sale of that personal property in such manner as they may designate, with or without advertising the sale.

(Source: P.A. 76-619.)

(70 ILCS 1005/7.2) (from Ch. 111 1/2, par. 80.2)

Sec. 7.2. Sale of real estate.

Any mosquito abatement district which acquires or holds any real estate for any purpose whatsoever has the power to convey the real estate when, in the opinion of three-fourths of the members of the board of trustees, the real estate is no longer necessary, appropriate, required for the use of, profitable to, or for the best interests of the mosquito abatement district. This power shall be exercised by an ordinance passed by such majority of the board of trustees then holding office, at any regular meeting or at any special meeting called for that purpose.

(Source: P.A. 76-619.)

(70 ILCS 1005/7.3) (from Ch. 111 1/2, par. 80.3)

Sec. 7.3. Ordinance directing sale-Publication-Bids-Deed of Conveyance.

An ordinance directing a sale of real estate shall specify the location of the real estate, the use thereof, and such conditions with respect to further use of the real estate as the board of trustees may deem necessary and desirable to the public interest. Before the board of trustees makes a sale, by virtue of such an ordinance, notice of the proposal to sell shall be published once each week for three successive weeks in a daily or weekly paper published in any county in which the mosquito abatement district is located. The first publication shall be not less than 30 days before the day provided in the notice for the opening of bids for the real estate. The notice shall contain an accurate description of the property, state the purpose for which it is used, the consideration which is acceptable for the sale, and the date of the regular or special meeting the bids will be considered and opened, and shall advertise for bids therefor. The board of trustees may accept the highest responsible bid by a vote of three-fourths of the members of the board of trustees then holding office, or by such majority vote of those holding office, they may reject any and all bids. If consideration other than money is offered for the sale of such real estate, the monetary value of that consideration must be determined by an appropriate, independent appraiser, and the appraisal must accompany the bid. Before accepting a bid of consideration other than money, the board of trustees must obtain a second, independent appraisal of such consideration in order to verify the appraisal which accompanied the bid.

If a bid is accepted by the board of trustees and the ordinance has been adopted and the consideration paid or secured, the chairman of the board of trustees shall convey the real estate and transfer it by proper deed of conveyance, stating therein the consideration therefor.

(Source: P.A. 76-619.)

(70 ILCS 1005/7.4) (from Ch. 111 1/2, par. 80.4)

Sec. 7.4. Purchases made pursuant to this Act shall be made in compliance with the "Local Government Prompt Payment Act", approved by the Eighty-fourth General Assembly.

(Source: P.A. 84-731.)

(70 ILCS 1005/7.5)

Sec. 7.5. Eminent domain. Notwithstanding any other provision of this Act, any power granted under this Act to acquire property by condemnation or eminent domain is subject to, and shall be exercised in accordance with, the Eminent Domain Act.

(Source: P.A. 94-1055, eff. 1-1-07.)

(70 ILCS 1005/8) (from Ch. 111 1/2, par. 81)

Sec. 8. The board of trustees of any mosquito abatement district shall, in its work, advise and cooperate with the Department of Public Health of the State, and the board of trustees of such district shall submit to such Department, on or before January 1st of each year, a report of the work done and results obtained by the district during the preceding year.

The board of trustees of any mosquito abatement district, or its designee, shall conduct routine surveillance of mosquitoes to detect the presence of mosquito-borne diseases of public health significance. The surveillance shall be conducted in accordance with mosquito abatement and control guidelines as set

forth by the U.S. Centers for Disease Control and Prevention. Areas reporting disease in humans shall be included in the surveillance activities. Mosquito abatement districts shall report to the local certified public health department the results of any positive mosquito samples infected with any arboviral infections, including, but not limited to: West Nile Virus, St. Louis Encephalitis, and Eastern Equine Encephalitis. Reports shall be made to the local certified public health department's director of environmental health, or a designee of the department, within 24 hours after receiving a positive report. The report shall include the type of infection, the number of mosquitoes collected in the trapping device, the type of trapping device used, and the type of laboratory testing used to confirm the infection. Any trustee of a mosquito abatement district, or designee of the board of trustees of a mosquito abatement district, that fails to comply with the requirements of this Act is guilty of a Class A Misdemeanor.
(Source: P.A. 93-734, eff. 7-14-04.)

(70 ILCS 1005/9) (from Ch. 111 1/2, par. 82)

Sec. 9. Any mosquito abatement district organized under the provisions of this Act may levy and collect a general tax on the property situated in such district, but the aggregate amount of taxes levied for any one year shall not exceed the rate of .025%, or the limitation in effect on July 1, 1967, whichever is greater, of value, as equalized or assessed by the Department of Revenue. The board of trustees shall determine and certify the amount to be levied and shall return the same to the county clerk. The county clerk in reducing the tax levies under Section 2 of "An Act concerning the levy and extension of taxes", approved May 9, 1901, as amended, shall not include the tax authorized by this Act in the limitation of one per cent of the assessed valuation upon which taxes are required to be extended. The foregoing limitations upon tax rates may be increased or decreased under the referendum provisions of the General Revenue Law of Illinois.

In case the district is located in more than one county the board of trustees shall determine and certify the amount to be levied upon the taxable property lying in each county and return the same to the respective county clerks of the counties in which the amount is to be levied. In order to determine the amount to be levied upon the taxable property of that part of the district lying in each county the board shall ascertain from the county clerk of the respective counties in which the district lies, the last ascertained equalized value of the taxable property of such district lying in their respective counties, then shall ascertain the rate per cent required and shall, accordingly, apportion the whole amount to be raised between the several parts of the district so lying in the different counties. The tax provided for in this Section shall be levied at the same time and in the same manner as nearly as practicable as taxes are now levied for city and village purposes under the laws of this State.

All such general taxes when collected shall be paid over to the treasurer of the board of trustees, who is authorized to receive and receipt for the same.
(Source: P.A. 81-1509.)

(70 ILCS 1005/9.1) (from Ch. 111 1/2, par. 82.1)

Sec. 9.1. Any mosquito abatement district organized under the provisions of this Act in the preparation of its annual budget and appropriation ordinance may provide that an amount equal to not more than one-half of one percent of the total equalized assessed value of real property situated in the

district shall be allocated to and accumulated in a Capital Improvement, Repair or Replacement Fund for the purposes of specific capital improvements, repairs or replacements of specific types of district equipment or other real or personal property. Expenditures from the Capital Improvement, Repair or Replacement Fund shall be budgeted and appropriated for the fiscal year in which the capital improvement, repair or replacement will occur. Upon completion or abandonment of any object or purpose for which a Capital Improvement, Repair or Replacement Fund has been initiated, monies remaining in such fund shall be transferred into the general corporate fund of the district on the first day of the fiscal year following such abandonment or completion resulting in such surplus monies in such fund.

(Source: P.A. 83-171.)

(70 ILCS 1005/9.5)

Sec. 9.5. Levy and collection of taxes by municipalities and districts for mosquito abatement services. If a municipality budgets for and provides mosquito abatement services and levies, within its general tax levy, a tax to fund those services, and if the municipality lies wholly or partially within a district that also levies a district tax upon territory that lies in both the affected municipality and the district, then:

(1) The affected municipality shall pay to the district the amount collected by the municipality from its levy upon territory that lies within the affected district that is also levying a district tax on the territory for the same type and quantity of services.

(2) Whenever a district receives any payment from any municipality, as provided for in this Section, the district shall reduce and abate the taxes levied by the district on the territory that is subject to taxation for the same type and quantity of mosquito abatement purposes by both the affected municipality and the district, at a rate that would reduce the taxes by an amount equal to the amount received by the district.

(Source: P.A. 90-431, eff. 8-16-97.)

(70 ILCS 1005/10) (from Ch. 111 1/2, par. 83)

Sec. 10. Any territory lying adjacent and contiguous to a mosquito abatement district, and not part of another mosquito abatement district, may be annexed to such district in the following manner:

(a) Upon petition in writing, describing the territory proposed to be annexed and signed by a majority of the legal voters in such territory and by the owners of more than half of the taxable property in such territory as shown by the last ascertained equalized value of the taxable property in such territory, being filed with the trustees of such mosquito abatement district, such trustees may annex such territory by a resolution which shall be published at least once in a newspaper having a general circulation in the territory and shall include a notice of (1) the specific number of voters required to sign a petition requesting that the question of the adoption of the resolution be submitted to the electors of the territory; (2) the time in which the petition must be filed; and (3) the date of the prospective referendum. The county clerk of the county in which the territory is situated shall provide a petition form to any individual requesting one. The resolution shall be effective 30 days from the date of publication and is subject to a referendum, if such referendum is requested, prior to the effective date of the resolution, by the voters in the district equal to 10% or more of the registered voters in the district.

Such trustees may also order the question of the annexation of such territory to be submitted to the legal voters of such district at a regular election therein by certifying the question to the proper election officials. Notice of such election shall be given and the election conducted in the manner provided by the general election law. The proposition shall be stated, "Shall the territory (describing it) be annexed to The... Mosquito Abatement District?" If the majority of all the votes cast on the question is in favor of such annexation, the board of trustees shall so certify to the county clerk, and within ten days of such election the trustees by an order duly entered upon their records shall annex such territory to the district and shall file a map of the annexed territory in the office of the county clerk of the county where the annexed territory is situated. Thereupon such territory shall be deemed annexed to and shall be a part of such mosquito abatement district.

(b) Whenever a mosquito abatement district contains over 90% of territory of a specific city or village, the mosquito abatement district may annex additional adjacent and contiguous territory within that city or village, but not incorporated within a mosquito abatement district, by the passage of an ordinance to that effect.

The ordinance authorizing the annexation shall be published within 10 days after the ordinance has been adopted, in one or more newspapers having a general circulation within the territory. The publication of the ordinance shall be accompanied by a notice of (1) the specific number of voters required to sign a petition requesting the question of annexation; (2) the time within which the petition must be filed; and (3) the date of the prospective referendum. The county clerk of the county in which the territory is situated shall provide a petition form to any individual requesting one.

The ordinance shall take effect 30 days after the date of publication unless a referendum is requested prior to the effective date of the ordinance by 10% or more of the registered voters in the territory. The question of the annexation of the territory may be submitted to the legal voters of the territory at a regular election by certifying the question to the proper election officials. Notice of the election shall be given and the election conducted in the manner provided by the general election law. The proposition shall be stated, "Shall the territory (describing it) be annexed to The... Mosquito Abatement District?" If the majority of all the votes cast on the question is in favor of the annexation, the territory shall be deemed annexed to and shall be a part of the mosquito abatement district.

No territory may be annexed under this subsection (i) more than one year after it has first been included in that city or village unless the territory so annexed is 50 acres or less or (ii) if the annexation would expand the mosquito abatement district's boundaries outside of a county unless the district already contains territory in that county.

(Source: P.A. 95-664, eff. 10-11-07.)

(70 ILCS 1005/11) (from Ch. 111 1/2, par. 84)

Sec. 11. Any mosquito abatement district organized under the provisions of this Act may be dissolved and discontinued upon like petition, hearing and election as is provided in this Act for the organization of such district. If a majority of the votes cast on the question at such election are in favor of such dissolution, the court shall enter an order of record in the court dissolving such district. The trustees of such mosquito abatement district shall immediately proceed to wind up the

affairs of such district and shall have the same powers as before dissolution to levy taxes for the purpose of paying the debts, obligations and liabilities of such mosquito abatement district outstanding on the date of such dissolution and the necessary expenses of closing up the affairs of such district. All property of such district shall be sold and in case any excess remains after all liabilities of such district are paid such excess shall be paid to the various common school districts located in such mosquito abatement district ratably in the proportion that the taxable value of all the property in each of the school districts bears to the taxable value of all the property in the mosquito abatement district.

(Source: P.A. 83-343.)

(70 ILCS 1005/11.5)

Sec. 11.5. Cessation of district organization. Notwithstanding any other provision of law, if a majority vote of the board of trustees of a mosquito abatement district is in favor of a proposition to annex the district to another mosquito abatement district whose boundaries are contiguous, consolidate the district into a municipality whose boundaries are coterminous or substantially coterminous with the district, consolidate the district into the township in which the district sits, or consolidate the district into the county in which the district sits, and if the governing authorities of the governmental unit assuming the functions of the former district agree by resolution to accept the functions (and jurisdiction over the territory, if applicable) of the consolidated or annexed district, then the district shall cease. On the effective date of the annexation or consolidation, all the rights, powers, duties, assets, property, liabilities, indebtedness, obligations, bonding authority, taxing authority, and responsibilities of the district shall vest in and be assumed by the governmental unit assuming the functions of the former district.

The employees of the former district shall be transferred to the governmental unit assuming the functions of the former district. The governmental unit assuming the functions of the former district shall exercise the rights and responsibilities of the former district with respect to those employees. The status and rights of the employees of the former district under any applicable contracts or collective bargaining agreements, historical representation rights under the Illinois Public Labor Relations Act, or under any pension, retirement, or annuity plan shall not be affected by this amendatory Act of the 100th General Assembly.

(Source: P.A. 100-793, eff. 1-1-19.)

(70 ILCS 1005/12) (from Ch. 111 1/2, par. 85)

Sec. 12. The invalidity of any part or portion of this act shall not affect the validity of the remaining part thereof.

(Source: Laws 1927, p. 694.)

(70 ILCS 1005/12a) (from Ch. 111 1/2, par. 85.1)

Sec. 12a. Any mosquito abatement district organized under the provisions of this Act which lies wholly within a county having fewer than 1,000,000 inhabitants which levies a tax for mosquito abatement pursuant to Section 25.05-4 of "An Act in relation to counties", approved March 31, 1874, as heretofore or hereafter amended, shall be dissolved and discontinued upon the action by such county board which levies such tax.

The trustees of such mosquito abatement district shall immediately proceed to wind up the affairs of such district and shall have the same powers as before dissolution to levy taxes

for the purpose of paying the debts, obligations and liabilities of such mosquito abatement district outstanding on the date of such dissolution and the necessary expenses of closing up the affairs of such district. All property of such district shall be sold and in case any excess remains after all liabilities of such district are paid such excess shall be paid to the various common school districts located in such mosquito abatement district ratably in the proportion that the taxable value of all the property in each of the school districts bears to the taxable value of all the property in the mosquito abatement district.

(Source: Laws 1963, p. 3019.)

(70 ILCS 1005/13) (from Ch. 111 1/2, par. 85a)

Sec. 13. The owner or owners of record of any area of land consisting of one or more tracts lying within the corporate limits of any mosquito abatement district may have the area disconnected from the mosquito abatement district in the following manner:

The owner or owners of record of any such tract or tracts of land shall file a petition in the Circuit Court of the county in which the district was organized alleging facts in support of disconnection, including the following:

(1) That the tract or tracts involved are located upon the border of the district;

(2) That disconnection will not result in the isolation of any part of the district from the remainder of the district;

(3) That disconnection will not destroy, or impair the effectiveness of the mosquito abatement district in the performance of its lawful functions of controlling and exterminating mosquitoes, flies and other insects within the district;

(4) That disconnection will not jeopardize the financial position of the district;

(5) And that disconnection will not adversely affect the public health and welfare.

The mosquito abatement district from which disconnection is sought shall be made a defendant, and it or any taxpayer residing in the district may appear and defend against the petition.

The court shall set the petition for hearing on a date not less than 30 days after the filing of the petition, and copy of the petition shall be mailed to the Department of Public Health of the State of Illinois and to the Illinois State Natural History Survey by the clerk of the court, such copies to be furnished by the petitioners. The court shall not proceed to final hearing of the petition without a joint written report from the Department of Public Health and the Illinois State Natural History Survey as to the probable effect upon the public health and welfare and upon the effectiveness of the mosquito abatement district in the performance of its lawful duties if disconnection were granted as prayed. A copy of such report shall also be mailed to the petitioners or their attorneys of record. The court shall upon request grant to any party the right to examine witnesses from such state agencies as may have investigated the facts incorporated in any such reports.

If the court finds that the allegations of the petition are true and that the area of land is entitled to disconnection, it shall order the specified land disconnected from the mosquito abatement district and thereupon said land shall cease to be a part of such district. Said land shall not, however, be relieved from any bonded indebtedness of the district previously created as to its proportionate share thereof.

The decision of the court is appealable as in other civil

cases.

The provisions of this section 13 shall not apply to districts incorporated in counties of over 500,000 population. (Source: Laws 1967, p. 3973.)

(70 ILCS 1005/13a) (from Ch. 111 1/2, par. 85b)

Sec. 13a. Any territory which lies within a mosquito abatement district and which lies within a county which levies a tax for mosquito abatement pursuant to Section 25.05-4 of "An Act in relation to counties", approved March 31, 1874, as heretofore or hereafter amended, shall be disconnected from such mosquito abatement district upon the action by the county board of such county which levies such tax and shall cease to be a part of such district. Such land shall not, however, be relieved from any bonded indebtedness of the district previously created as to its proportionate share thereof.

(Source: Laws 1963, p. 3019.)

ORDINANCE NO. 2022-5-1

ANNUAL BUDGET AND APPROPRIATION ORDINANCE

AN ORDINANCE of the Board of Trustees of the Desplaines Valley Mosquito Abatement District, appropriating monies for its general corporate purposes and special funds to be extended during the fiscal year beginning May 1, 2022 and ending April 30, 2023.

BE IT ORDAINED BY THE BOARD OF TRUSTEES OF THE DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT OF THE COUNTY OF COOK AND STATE OF ILLINOIS:

SECTION 1 - The following sums, or so much thereof as hereby may be authorized by law, and as may be needed, be and the same are hereby appropriated for the corporate purposes of the Desplaines Valley Mosquito Abatement District for the fiscal year beginning May 1, 2022 and ending April 30, 2023.

SECTION 2 - The following budget containing an estimate of revenues and expenditures is hereby adopted for the following funds:

- | | |
|------------------------------------|--|
| 1. General Corporate Fund | 4. Annual Audit Fund |
| 2. Illinois Municipal Retire. Fund | 5. Capital Improvement, Repair or Replacement Fund |
| 3. Social Security Fund | |

1. GENERAL CORPORATE FUND

BEGINNING BALANCE May 1, 2022		\$ 1,354,215.39
Transfer to Cap Improv, Repair or Replacement Fund	<u>400,000.00</u>	
TRANSFER TOTAL:		<u>400,000.00</u>
NET BEGINNING BALANCE May 1, 2022		\$ 954,215.39

ESTIMATED REVENUES

Property Tax	\$1,299,835.00	
Replacement Tax-Corp. Pers. Prop.	33,054.00	
Interest Income	5,000.00	
Miscellaneous Income	<u>3,000.00</u>	
TOTAL ESTIMATED REVENUES:		\$ <u>1,340,889.00</u>

TOTAL ESTIMATED FUNDS AVAILABLE		\$ 2,295,104.39
---------------------------------	--	-----------------

BUDGETED EXPENDITURES

Personal Services	\$ 979,566.00	
Contractual Services	227,440.00	
Commodities	1,045,583.78	
Contingencies	<u>122,000.00</u>	
TOTAL EXPENDITURES/APPROPRIATIONS:		\$ <u>2,374,589.78</u>
ENDING BALANCE APRIL 30, 2023		\$ - 79,485.39

1. GENERAL CORPORATE FUNDPersonal Services

Staff Salaries	\$ 586,602.00
Field Wages	274,400.00
Health Insurance	73,008.00
Workers Comp. Insurance	32,000.00
Unemployment Insurance	12,806.00
Bonds for Public Officials	<u>750.00</u>

\$ 979,566.00

Contractual Services

Building Maintenance	\$ 24,000.00
Vehicle Maintenance	24,000.00
Spray Equip. Maintenance	6,000.00
Ditching Equip. Maintenance	500.00
Communications Equip. Maint.	1,500.00
Office Equip. Maintenance	2,400.00
Shop Equipment Maintenance	2,400.00
Field Tools Maintenance	480.00
Lab Equipment Maintenance	6,000.00
Computer Equip. Maintenance	1,200.00
Grounds Maintenance	7,200.00
Vehicle Insurance	60,000.00
Operational Liability Insurance	45,000.00
Building/Property Insurance	6,000.00
Equipment Floater Insurance	3,000.00
Telephone	3,000.00
Water	1,300.00
Electricity	5,000.00
Heat - Gas Service	5,050.00
Alarm Monitoring Service	1,050.00
Refuse Service	3,800.00
Banking Charges/Service Fees	495.00
Meetings and Conferences	7,200.00
Postage and Box Rental	1,370.00
Legal Expense of Attorney	2,400.00
Publication of Legal Notices	300.00
Uniforms - Laundry Service	3,550.00
Vehicle License & Insp. Fees	290.00
Spray License/Permit Fees	700.00
Association Membership Dues	565.00
Technical Subscriptions	240.00
Gravid/Light Trap Operation	850.00
Waste Tire Disposal Fees	<u>600.00</u>

\$ 227,440.00

<u>Commodities</u>		
Public Relations Material	\$	1,500.00
Lab Supplies		48,000.00
Office Supplies		2,400.00
Gasoline		42,000.00
Insecticides		926,583.78
Lubricants		3,500.00
Janitorial Supplies		1,200.00
Hardware Supplies		2,400.00
Expendable Supplies		<u>18,000.00</u>
		\$ 1,045,583.78
<u>Other Expenditures</u>		
Contingencies	\$	96,000.00
Insurance Deductibles		<u>26,000.00</u>
		\$ 122,000.00
TOTAL OF GENERAL CORPORATE FUND APPROPRIATION:		\$ 2,374,589.78

2. ILLINOIS MUNICIPAL RETIREMENT FUND (IMRF)

BEGINNING BALANCE	May 1, 2022		\$	21,626.00
ESTIMATED REVENUES				
Property Tax		\$	34,813.00	
Replacement Tax-Corp Pers.Prop.			<u>325.00</u>	
TOTAL ESTIMATED REVENUES:				\$ <u>35,138.00</u>
TOTAL ESTIMATED FUNDS AVAILABLE:				\$ 56,764.00
BUDGETED EXPENDITURES				
I.M.R.F. - District Share		\$	<u>21,626.00</u>	
TOTAL EXPENDITURES/APPROPRIATIONS:				\$ <u>21,626.00</u>
ENDING BALANCE	April 30, 2023		\$	35,138.00

3. SOCIAL SECURITY FUND

BEGINNING BALANCE	May 1, 2022		\$ 45,145.30
ESTIMATED REVENUES			
Property Tax		\$ 56,638.00	
Replacement Pers. Prop Tax		<u>1,621.00</u>	
TOTAL ESTIMATED REVENUES:			\$ <u>58,259.00</u>
TOTAL ESTIMATED FUNDS AVAILABLE:			\$ 103,404.30
BUDGETED EXPENDITURES			
Social Sec.- District Share		\$ 53,381.00	
Medicare - District Share		<u>12,483.00</u>	
TOTAL EXPENDITURES/APPROPRIATIONS			\$ <u>65,864.00</u>
ENDING BALANCE	April 30, 2023		\$ 37,540.30

4. ANNUAL AUDIT FUND

BEGINNING BALANCE	May 1, 2022		\$ 318.07
ESTIMATED REVENUES			
Property Tax		\$ 7,300.00	
TOTAL ESTIMATED REVENUES:			\$ <u>7,300.00</u>
TOTAL ESTIMATED FUNDS AVAILABLE:			\$ 7,618.07
BUDGETED EXPENDITURES			
Annual Audit		\$ <u>7,500.00</u>	
TOTAL EXPENDITURES/APPROPRIATIONS:			\$ <u>7,500.00</u>
ENDING BALANCE	April 30, 2023		\$ 118.07

5. CAPITAL IMPROVEMENT, REPAIR OR REPLACEMENT

BEGINNING BALANCE May 1, 2022	\$	0.00
Transfer from General Fund		<u>400,000.00</u>
NET BEGINNING BALANCE May 1, 2022	\$	400,000.00
 TOTAL ESTIMATED REVENUES:	\$	<u>0.00</u>
 TOTAL ESTIMATED FUNDS AVAILABLE:	\$	400,000.00

BUDGETED EXPENDITURES
CAPITAL OUTLAY

Office Equipment	\$	7,500.00
Lab Equipment		10,000.00
Communication Equipment		5,000.00
Field Equipment		25,000.00
Shop Equipment		15,000.00
Building		7,500.00
Computer System Equipment		9,500.00
Vehicles		250,000.00
UST Mandatory Tank Update		<u>70,500.00</u>

TOTAL EXPENDITURES/APPROPRIATIONS:	\$	<u>400,000.00</u>
ENDING BALANCE April 30, 2023	\$	0.00

SECTION 3: That the amount appropriated for District purposes for fiscal year beginning May 1, 2022 and ending April 30, 2023 by fund shall be as follows:

1. GENERAL CORPORATE FUND	\$	2,374,589.78
2. ILLINOIS MUNICIPAL RETIRE.FUND		21,626.00
3. SOCIAL SECURITY FUND		65,864.00
4. ANNUAL AUDIT FUND		7,500.00
5. CAPITAL IMPROVEMENT, REPAIR OR REPLACEMENT FUND		<u>400,000.00</u>
 <u>TOTAL APPROPRIATIONS:</u>	\$	2,869,579.78

SECTION 4 - Each appropriated fund total shall be divided among the several objects and purposes specified, and in the particular amounts stated for each fund respectively in Section 2, constituting the total appropriations in the amount of Two Million Eight Hundred Sixty Nine Five Hundred Seventy Nine Dollars and Seventy Eight Cents (\$2,869,579.78) for the fiscal year beginning May 1, 2022 and ending April 30, 2023.

SECTION 5 - Section 3 shall be and is a summary of the annual Appropriation Ordinance of this District, passed by the Board of Trustees as required by law and shall be in full force and effect as hereinafter provided.

SECTION 6 - All sums of money not needed for immediate purposes may be invested in interest bearing obligations, including Certificates of Deposit, of any federally insured State or National Bank or Savings and Loan Association, as provided in the Illinois Public Funds Investment Act.

SECTION 7 - Any sum of money heretofore appropriated and not expended now in the Treasury of the Desplaines Valley Mosquito Abatement District, or that hereafter may come into the Treasury of the District, is hereby re-appropriated for this Ordinance.

SECTION 8 - All unexpended balances of any item or items of general appropriation for corporate purposes or special funds made by this Ordinance may be expended in making up any deficiency in any other item in the same general appropriation made by this Ordinance.

SECTION 9 - If any section, subdivision or sentence of this Ordinance is for any reason held invalid or to be unconstitutional, such decision shall not effect the validity of the remaining portion of this Ordinance.

SECTION 10 - A certified copy of the Annual Budget and Appropriation Ordinance shall be filed with the County Clerk of Cook County within 30 days after adoption.

SECTION 11 -This Appropriation Ordinance is adopted pursuant to procedures set forth pursuant to the Illinois Revised Statutes.

SECTION 12 - That the Secretary of the Board be and hereby is authorized and directed to publish this Ordinance in pamphlet form and this Ordinance shall be in full force and effect upon its adoption, approval, and publication as provided by law.

SECTION 13 - Attached hereto as Exhibit "A" and made a part hereof is an estimate of revenues by source anticipated to be received by the District for the fiscal year May 1, 2022 to April 30, 2023.

PASSED by the Board of Trustees of the Desplaines Valley Mosquito Abatement District this 19th day of May, 2022, A.D. pursuant to roll call vote as follows:


Ayes: 3

Nays: 0

Absent: 0

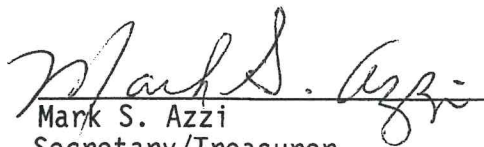
APPROVED this 19th day of May, 2022, A.D.

PUBLISHED THIS 19th day of May, 2022, A.D.
IN PAMPHLET FORM.



Reatha S. Henry
President, Board of Trustees

ATTEST:



Mark S. Azzi
Secretary/Treasurer
Board of Trustees


STATE OF ILLINOIS)

)

COUNTY OF COOK)

The undersigned, Mark S. Azzi hereby certifies that he is the duly elected and qualified Secretary/Treasurer of the Desplaines Valley Mosquito Abatement District, and states that he is also one of the trustees thereof, and that the document annexed is a true, complete, and correct copy of the Annual Budget and Appropriation Ordinance (No.2022-5-1) for the fiscal year beginning May 1, 2022 and ending April 30, 2023 as taken from his files as passed and approved on May 19, 2022, at Lyons, Illinois.

IN WITNESS THEREOF, the undersigned has hereunto set his hand and affixed the corporate seal of the Desplaines Valley Mosquito Abatement District, County of Cook, State of Illinois, this 19th day of May, 2022 A.D.


Mark S. Azzi
Secretary/Treasurer
Board of Trustees

CERTIFICATE OF ESTIMATED REVENUE

DESPLAINES VALLEY
MOSQUITO ABATEMENT DISTRICT

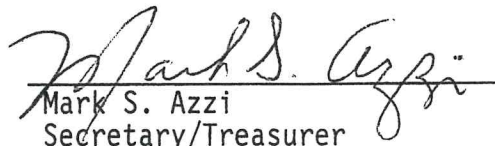
COOK COUNTY, ILLINOIS

I, Mark S. Azzi, do certify as follows:

1. I am the Secretary/Treasurer of the Desplaines Valley Mosquito Abatement District, County of Cook, State of Illinois, and further that I am a trustee of the District thereof.
2. I estimate the revenue, by source, of the Desplaines Valley Mosquito Abatement District for the fiscal year beginning May 1, 2022 and ending April 30, 2023, to be as follows:

<u>SOURCE</u>	<u>AMOUNT</u>
2021 Property Tax Levy Income per TAX LEVY ORDINANCE NO. 2021-12-1 Total Levy = \$ 1,398,586.00; theoretical balance to be received in fiscal year before application of Tax Cap Criteria	\$ 627,027.25
Replacement Corporate Personal Property Tax	35,000.00
Miscellaneous Income	3,000.00
Interest Income from Savings Accounts, Certificates of Deposit	5,000.00

In Witness Whereof, I have signed my name in my official capacity as Secretary/Treasurer of the Board of Trustees of the Desplaines Valley Mosquito Abatement District, at Lyons, Illinois, this 19th day of May, 2022.


 Mark S. Azzi
 Secretary/Treasurer
 Desplaines Valley Mosquito
 Abatement District

ORDINANCE NO. 2022-12-1
TAX LEVY ORDINANCE

AN ORDINANCE FOR THE LEVY AND ASSESSMENT OF TAXES FOR
GENERAL CORPORATE PURPOSES AND SPECIAL FUNDS FOR THE
FISCAL YEAR BEGINNING MAY 1, 2022 AND ENDING APRIL 30,
2023 OF THE DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT,
COUNTY OF COOK, AND STATE OF ILLINOIS

WHEREAS, the Board of Trustees of the Desplaines Valley Mosquito Abatement District, in the County of Cook and State of Illinois, did on the 19th day of May, 2022, pass and adopt the Annual Budget and Appropriation Ordinance for the said Desplaines Valley Mosquito Abatement District for the fiscal year commencing on the 1st day of May, 2022, and ending on the 30th day of April, 2023, the amount of which is ascertained to be the aggregate sum of TWO MILLION EIGHT HUNDRED SIXTY NINE THOUSAND FIVE HUNDRED SEVENTY NINE DOLLARS AND SEVENTY EIGHT CENTS (\$2,869,579.78) which said Annual Budget and Appropriation Ordinance was duly passed and approved on the 19th day of May, 2022; and published in pamphlet form on May 19, 2022;

BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT, COUNTY OF COOK, STATE OF ILLINOIS;

SECTION 1: That there be and hereby is levied upon all of the taxable property within the territorial limits of the Desplaines Valley Mosquito Abatement District, for the fiscal year beginning on May 1, 2021 and ending on April 30, 2022, the total sum of ONE MILLION FOUR HUNDRED NINETY EIGHT THOUSAND FIVE HUNDRED EIGHTY SIX DOLLARS AND NO CENTS (\$1,498,586.00). The specific purposes for which appropriations were made and for which this levy is made and the sum or amount appropriated for each purpose, respectively, are as follows: to-wit:

<u>CATEGORY</u>	<u>AMOUNT OF APPROPRIATION</u>	<u>OTHER REVENUE</u>	<u>TO BE RAISED BY TAX LEVY</u>
<i>I. GENERAL CORPORATE FUND</i>			
<u>Personal Services</u>			
Staff Salaries	\$ 586,602.00	\$ 208,952.00	\$ 377,650.00
Field Wages	274,400.00	21,075.00	253,325.00
Health Insurance	73,008.00	7,005.00	66,003.00
Workers Comp. Insurance	32,000.00	12,272.00	19,728.00
Unemployment Insurance	12,806.00	3,213.00	9,593.00
Bonds for Public Officials	750.00	750.00	0.00
	<u>\$ 979,566.00</u>	<u>\$ 253,267.00</u>	<u>\$ 726,299.00</u>
<u>Contractual Services</u>			
Building Maintenance	\$ 24,000.00	\$ 14,422.00	\$ 9,578.00
Vehicle Maintenance	24,000.00	8,671.00	15,329.00
Spray Equip. Maintenance	6,000.00	5,424.00	576.00
Ditching Equip. Maintenance	500.00	500.00	0.00
Communications Equip. Maint.	1,500.00	1,312.00	188.00
Office Equipment Maintenance	2,400.00	824.00	1,576.00
Shop Equipment Maintenance	2,400.00	0.00	2,400.00
Field Tools Maintenance	480.00	438.00	42.00
Lab Equipment Maintenance	6,000.00	5,580.00	420.00
Computer Equip. Maintenance	1,200.00	395.00	805.00

	<u>AMOUNT OF APPROPRIATION</u>	<u>OTHER REVENUE</u>	<u>TO BE RAISED BY TAX LEVY</u>
Grounds Maintenance	7,200.00	3,611.00	3,589.00
Vehicle Insurance	60,000.00	7,952.00	52,048.00
Operational Liability Ins.	45,000.00	13,455.00	31,545.00
Building/Property Insurance	6,000.00	2,984.00	3,016.00
Equipment Floater Insurance	3,000.00	1,815.00	1,185.00
Telephone	3,000.00	1,005.00	1,995.00
Water	1,300.00	501.00	799.00
Electricity	5,000.00	1,870.00	3,130.00
Heat - Gas Service	5,050.00	1,401.00	3,649.00
Alarm Monitoring Service	1,050.00	241.00	809.00
Refuse Service	3,800.00	280.00	3,520.00
Banking Charges/Service Fees	495.00	140.00	355.00
Meetings and Conferences	7,200.00	4,646.00	2,554.00
Postage and Box Rental	1,370.00	363.00	1,007.00
Legal Expense - Attorney	2,400.00	2,400.00	0.00
Publication of Legal Notices	300.00	124.00	176.00
Uniforms - Laundry Service	3,550.00	2,105.00	1,445.00
Vehicle License & Inspec.Fees	290.00	252.00	38.00
Spray License/Permit Fees	700.00	700.00	0.00
Association Membership Dues	565.00	110.00	455.00
Technical Subscriptions	240.00	240.00	0.00
Gravid/Light Trap Operation	850.00	468.00	382.00
Waste Tire Disposal Fees	600.00	600.00	0.00
	<u>\$227,440.00</u>	<u>\$ 84,829.00</u>	<u>\$ 142,611.00</u>
<u>Commodities</u>			
Public Relations Material	\$ 1,500.00	\$ 1,323.00	\$ 177.00
Lab Supplies	48,000.00	0.00	48,000.00
Office Supplies	2,400.00	764.00	1,636.00
Gasoline	42,000.00	26,561.00	15,439.00
Insecticides	926,583.78	532,422.06	394,161.72
Lubricants	3,500.00	363.00	3,137.00
Janitorial Supplies	1,200.00	413.00	787.00
Hardware Supplies	2,400.00	0.00	2,400.00
Expendable Supplies	<u>18,000.00</u>	<u>11,700.00</u>	<u>6,300.00</u>
	<u>\$ 1,045,583.78</u>	<u>\$573,546.06</u>	<u>\$ 472,037.72</u>
<u>Other Expenditures</u>			
Contingencies	\$ 96,000.00	\$ 45,162.65	\$ 50,837.35
Insurance Deductibles	<u>26,000.00</u>	<u>14,189.07</u>	<u>11,810.93</u>
	<u>\$ 122,000.00</u>	<u>\$ 59,351.72</u>	<u>\$ 62,648.28</u>
 GENERAL FUND TOTALS:	 \$ 2,374,589.78	 \$ 970,993.78	 \$1,403,596.00

	<u>AMOUNT OF APPROPRIATION</u>	<u>OTHER REVENUE</u>	<u>TO BE RAISED BY TAX LEVY</u>
II. <i>ILLINOIS MUNICIPAL RETIREMENT FUND (IMRF)</i>			
IMRF - District Share	\$ 21,626.00	\$ 0.00	\$ 21,626.00
IMRF - FUND TOTALS:	\$ 21,626.00	\$ 0.00	\$ 21,626.00

Levied for the foregoing annual requirement of the Illinois Municipal Retirement Fund from which the special tax for that purpose is in addition to all other taxes.

III. <i>SOCIAL SECURITY FUND</i>			
Social Security Dis. Share	\$ 53,381.00	\$ 0.00	\$ 53,381.00
Medicare - District Share	12,483.00	0.00	12,483.00
SOCIAL SECURITY FUND TOTALS:	\$ 65,864.00	\$ 0.00	\$ 65,864.00

Levied for the foregoing annual requirement of District's share of social security and medicare contribution from which the special tax for that purpose is in addition to all other taxes.

IV. <i>ANNUAL AUDIT FUND</i>			
Annual Audit	\$ 7,500.00	\$ 0.00	\$ 7,500.00
AUDIT FUND TOTALS:	\$ 7,500.00	\$ 0.00	\$ 7,500.00

Levied for the foregoing annual requirement of an annual audit from which the special tax for that purpose is in addition to all other taxes.

V. <i>CAPITAL IMPROVEMENT, REPAIR OR REPLACEMENT FUND</i>			
Office Equipment	\$ 7,500.00	\$ 7,500.00	\$ 0.00
Lab Equipment	10,000.00	10,000.00	0.00
Communications Equipment	5,000.00	5,000.00	0.00
Field Equipment	25,000.00	25,000.00	0.00
Shop Equipment	15,000.00	15,000.00	0.00
Building	7,500.00	7,500.00	0.00
Computer System Equipment	9,500.00	9,500.00	0.00
Vehicle Purchase	250,000.00	250,000.00	0.00
UST Mandatory Tank Update	70,500.00	70,500.00	0.00
FUND TOTALS:	\$ 400,000.00	\$ 400,000.00	\$ 0.00

SUMMARY

The following are the total taxes to be levied for:

GENERAL CORPORATE FUND	\$ 1,403,596.00
ILLINOIS MUNICIPAL RETIREMENT FUND	21,626.00
SOCIAL SECURITY FUND	65,864.00
ANNUAL AUDIT FUND	7,500.00
CAPITAL IMPROVEMENT, REPAIR OR REPLACEMENT FUND	0.00
	<u>\$ 1,498,586.00</u>

SECTION 2: The secretary of the Desplaines Valley Mosquito Abatement District is hereby directed to file with the County Clerk of Cook County a certified copy of this Levy Ordinance, and said County Clerk, aforesaid, is hereby requested and directed to cause the sum of ONE MILLION FOUR HUNDRED NINETY EIGHT THOUSAND FIVE HUNDRED EIGHTY SIX DOLLARS AND NO CENTS (\$1,498,586.00) to be extended upon and against the taxable property within the territorial limits of the Desplaines Valley Mosquito Abatement District in accordance with the laws of the statutes of the State of Illinois, in such case made and provided.

SECTION 3: In the event the levy extension exceeds the tax cap limitation as specified in the provisions of the Property Tax Extension Limitations Act, the County Clerk of Cook County is hereby requested to proportionally reduce the levy of each fund subject to the Act.

SECTION 4: The Treasurer of this District is hereby directed to transfer the sum of FOUR HUNDRED THOUSAND DOLLARS AND NO CENTS (\$400,000.00) on hand in the General Corporate Fund on April 30, 2022 and not otherwise pledged or allocated to a particular purpose in such Fund to the Capital Improvement, Repair or Replacement Fund for the purposes heretofore itemized in Section 1 of this Ordinance; said amount, together with all other funds on hand in the Capital Improvement, Repair or Replacement Fund being less than one-half of one percent of the total equalized assessed valuation of all property subject to taxation by the District.

SECTION 5: All other ordinances or parts of ordinances in conflict herewith, are hereby repealed.

SECTION 6: This ordinance shall take effect and be in full force from and after its passage and approval.

PASSED by the Board of Trustees of the Desplaines Valley Mosquito Abatement District this 2nd day of December, 2022, A.D. pursuant to roll call vote as follows:


Ayes: 3

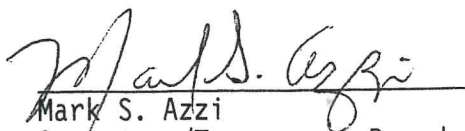
Nays: 0

Absent: 0

APPROVED this 2nd day of December, 2022, A.D.

ATTEST:


Reatha S. Henry
President, Board of Trustees


Mark S. Azzi
Secretary/Treasurer, Board of Trustees

STATE OF ILLINOIS)
)
COUNTY OF COOK)

The undersigned, Mark S. Azzi, hereby certifies that he is the duly elected and qualified Secretary/Treasurer of the Desplaines Valley Mosquito Abatement District, and states that he is also one of the trustees thereof, and that the document annexed is a true, complete, and correct copy of the Tax Levy Ordinance (No. 2022-12-1) for the fiscal year beginning on the 1st day of May, 2022, and ending on the 30th day of April, 2023, taken from his files as passed and approved on December 2, 2022, at Lyons, Illinois.

IN WITNESS THEREOF, the undersigned has hereunto set his hand and affixed the corporate seal of the Desplaines Valley Mosquito Abatement District, County of Cook, State of Illinois, this December 2, 2022, A.D.


Mark S. Azzi
Secretary/Treasurer
Board of Trustees

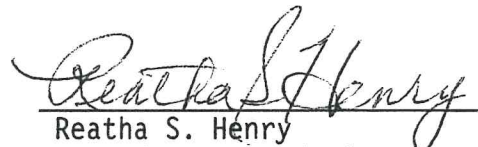
STATE OF ILLINOIS)

)SS

COUNTY OF COOK)

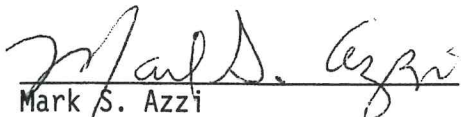
CERTIFICATE OF COMPLIANCE

I, Reatha S. Henry, certify that I am duly elected and qualified President of the Board of Trustees of the Desplaines Valley Mosquito Abatement District, Cook County, Illinois; that as such President, I am the presiding officer of said Desplaines Valley Mosquito Abatement District and hereby certify that on the 2nd day of December, 2022, A.D., I presided at a meeting of the Board of Trustees of the Desplaines Valley Mosquito Abatement District, Cook County, Illinois, wherein the attached Tax Levy Ordinance (No. 2022-12-1) for the tax year 2022 was duly passed and adopted pursuant to, and in all respects in compliance with the provisions of Division 2 - Truth in Taxation Law (35 ILCS 200/18-55 et seq.).



Reatha S. Henry
President, Board of Trustees

ATTEST:



Mark S. Azzi
Secretary/Treasurer
Board of Trustees

ORDINANCE NO. 2012-9-1(REV)

PROCUREMENT POLICY

AN ORDINANCE by the Board of Trustees of the Desplaines Valley Mosquito Abatement District establishing a procurement policy regarding the purchasing procedures for goods and services by the District

WHEREAS, the Board of Trustees of the Desplaines Valley Mosquito Abatement District deem it desirable, necessary, and in the public interest to establish a formal procurement policy for the purchase of goods and services.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF TRUSTEES OF THE DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT OF THE COUNTY OF COOK AND STATE OF ILLINOIS:

SECTION 1 - PURPOSE

The purpose of this ordinance is to provide procedures for purchases of equipment, materials, supplies, and services for the operational requirements of the Desplaines Valley Mosquito Abatement District. This ordinance is created to ensure competitive and unbiased selection of qualified and cost effective vendors and suppliers. The Manager shall be responsible for the day to day application of this policy, however the Board of Trustees will be the final authority regarding interpretation and enforcement of any procurement policy provisions.

SECTION 2 - PURCHASES

The Manager will have primary responsibility for purchases under this procurement policy, followed by the Assistant Manager and Mechanic in succession with Manager's absence. In general, purchases for materials and services for the District will be made using one of the following procedures:

1) Standard Competitive Purchases

- a. *Verbal Quotation* - Verbal quotations are in response by a vendor to a District inquiry on a specific product or service valued less than \$ 2,000. For purchases under \$ 1,000, a minimum of one quotation is required. For purchases in the \$ 1,001 - \$ 2,000 range, multiple quotes are required.
- b. *Written Quotation* - Written quotations are in response by a vendor to a District inquiry on a specific product or service valued less than \$ 25,000. Written quotations must be presented on a firm's letterhead or preprinted quotation form. Written quotations must be dated with duration of written quotation specified. Written quotations will require the signature of an authorized agent of the firm. Faxed or email quotations are acceptable. For purchases under \$ 1,000, a minimum of one quotation is required. For purchases in the \$ 1,001 - \$25,000 range, multiple quotes (3 minimum) are required.

- c. *Sealed Bid/Quotation* - Sealed bids/quotations shall be used for all purchases \$ 25,000 and above. Sealed bids/quotations are a written response by a vendor to a District-created list of specified products or services. The list is made available to interested vendors and the vendor responses are compared for price and compliance to the original list of items. The District will prepare specifications for the desired purchase. The specifications will include provisions for sealed bid/quotation procedures and other related items pertinent to the products or services requested. Solicitation for sealed bids/quotations will be advertised on the District's website, in local newspapers, or be faxed, mailed, or emailed to prospective vendors at the discretion of the District. Except for emergency matters, this advertisement will occur not less than 10 days prior to sealed bid/quotation opening. All sealed bids/quotations must be received before the deadline on the day of the sealed bid/quotation. No sealed bids/quotations will be accepted after the deadline for accepting bids. All sealed bids/quotations will be publicly opened by the Manager, or his/her designee at the time stated in the sealed bid/quotation notice. If sealed bid/quotation opening does not occur during a meeting of the board of trustees, at least one other District employee must serve as a witness. All proposals will be open to public inspection. Sealed bids/quotations for purchases over \$ 25,000 require initial approval of intended purchase by the board of trustees, with subsequent approval of contract award by the board of trustees.
- d. *Request for Proposals* - A request for proposal (RFP) is used to make a purchasing contract for services or materials in the amount of \$ 25,000 or more, and when detailed specifications are not reasonable (i.e. architectural services). A RFP is a District-created outline of a specific service or need. The vendor proposes a way to meet the District-defined service or need and outlines the cost associated with the proposal. A proposal may, in the discretion of the District, be subject to further negotiations, modifications, and rejections until the District accepts the proposal. All RFP's shall include provisions for proposal submission and other related items pertinent to the services or materials requested. Requests for proposals will be advertised on the District's website, in local newspapers, or be faxed, mailed, or emailed to prospective proposers at the discretion of the District. Except for emergency matters, this advertisement will occur not less than 10 days prior to the due date for proposals. All proposals must be received before the deadline on the day of the proposal. No proposals will be accepted after the specified deadline. All proposals will be publicly opened by the Manager, or his/her designee at the time stated in the proposal notice. If proposal opening does not occur during a meeting of the board of trustees, at least one other District employee must serve as a witness. All proposals will be open to public inspection. Proposals for services or materials over \$ 25,000 require initial approval of intended purchase by the board of trustees, with subsequent approval of contract award by the board of trustees.

2) Sole Source Contract

When it is determined that a particular product, service or work is not subject to competitive sealed bids/quotations due to limitations arising out of the nature of the product, service, work, or its availability, the District may negotiate and enter into contracts for materials or services with a sole source supplier.

3) Local Vendor Accounts

The District has established open accounts at certain local vendors for use in making purchases. An authorized list of employees qualified to make purchases on behalf of the District will be provided to each vendor. Individual and monthly purchase limits will be established with the vendors and amended as necessary.

4) Centralized Purchase/Joint Purchase

Many goods and services are available through the State of Illinois CMS program for utilization by governmental agencies. The District will attempt to utilize this purchasing option when feasible. In addition, the joint purchase of goods and services with other Mosquito Abatement Districts will be utilized when feasible. Items purchased through centralized purchase/joint purchase programs may not be subject to requirements for seeking competitive sealed bids/quotes.

5) Emergency Purchases

Emergencies are defined as events that could not have been foreseen where immediate action is necessary to safeguard the public's health and safety, or to maintain necessary District operations including physical facility. In the case of an emergency arising from unforeseen causes which require the immediate purchase of commodities or contractual services, the Manager may secure in the open market at the lowest obtainable price any commodities or contractual services, including those costing more than \$ 25,000 without full board approval. The Manager shall seek approval from the Board President, or Vice President if President is not available, prior to any emergency purchase over \$ 5,000. The full board of trustees shall be apprised of the emergency purchase at their next scheduled meeting.

SECTION 3 - CHANGE ORDERS

A change order means and includes a change in a contract term other than as specifically provided for in the contract which authorizes or necessitates any increase in the cost of a contract or the time of completion and which was not reasonably foreseeable at the time the contract was entered into, was not within the contemplation of the original contract, or is in the best interests of the District. The Manager may authorize a change order that is within budget limits and does not cause the total cost of a purchase contract to exceed 105% of the original contract or \$ 25,000 dollars, whichever is greater. Unless classified as an emergency purchase, the board of trustees must approve all change orders that would cause the total cost of a purchase contract to exceed 105% of the original contract or \$ 25,000.

SECTION 4 - COMPETITIVE PURCHASE EXEMPTIONS

When, in the ordinary course of District business, no single purchase of, or individual contract for, specific types of supplies and materials exceeds \$ 25 000, but the total dollar value of all purchases and/or contracts for said specific types of supplies and materials during the District's fiscal year does exceed said amount, said purchases may not be subject to the competitive purchase requirements. It is not the intent of this subsection to encourage the circumvention of the competitive purchase requirements and, to the extent applicable, the District will rely upon the competitive purchase process. Rather the competitive purchase exemption provided by this section is intended to recognize and address those situations in which a competitive purchase requirement is not necessarily practicable, and can be eliminated without jeopardizing the District's ability to obtain a low and competitive price from a qualified responsible contractor/vendor.

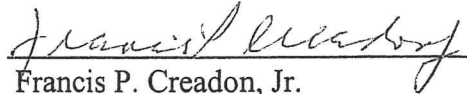
PASSED by the Board of Trustees of the Desplaines Valley Mosquito Abatement District this 20th day of September, 2012, A.D. pursuant to roll call vote as follows:

Ayes: 5

Nays: 0

Absent: 0

APPROVED this 20th day of September, 2012, A.D.


Francis P. Creadon, Jr.
President, Board of Trustees

ATTEST:


Mark S. Azzi
Secretary, Board of Trustees

**ORDINANCE NO. 2012-3-1
ETHICS POLICY**

**AN ORDINANCE BY THE BOARD OF TRUSTEES OF THE
DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT
ADOPTING A COMPREHENSIVE ETHICS POLICY REGULATING
DISTRICT OFFICIALS AND EMPLOYEES**

WHEREAS, the Illinois General Assembly has enacted the State Officials and Employees Ethics Act (Public Act 93-615, effective November 19, 2003, as amended by Public Act 93-617, effective December 9, 2003), which is a comprehensive revision of State statutes regulating ethical conduct, political activities and the solicitation and acceptance of gifts by State officials and employees; and

WHEREAS, it is the clear intention of the Act to require units of local government and school districts to implement regulations that are at least as restrictive as those contained in the Act, and to impose penalties for violations of those regulations that are equivalent to those imposed by the Act, notwithstanding that such penalties may exceed the general authority granted to units of local government to penalize ordinance violations; and

WHEREAS, it is the clear intention of the Act to provide units of local government with all authority necessary to implement its requirements on the local level regardless of any general limitations on the power to define and punish ordinance violations that might otherwise be applicable; and

WHEREAS, because the Act provides for the imposition of significant penalties for violations of said local regulations, it is necessary to adopt the required regulations by Ordinance rather than by Resolution;

**NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF TRUSTEES OF THE
DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT, AS FOLLOWS:**

SECTION 1: The Code of Ordinances of the Desplaines Valley Mosquito Abatement District is hereby amended by the addition of the following provisions:

**ARTICLE 1
DEFINITIONS**

Section 1-1. For purposes of this ordinance, the following terms shall be given these definitions:

"Campaign for elective office" means any activity in furtherance of an effort to influence the selection, nomination, election, or appointment of any individual to any federal, State, or local public office or office in a political organization, or the selection, nomination, or election of Presidential or Vice-Presidential electors, but does not include activities (i) relating to the support or opposition of any executive, legislative, or administrative action, (ii) relating to collective bargaining, or (iii) that are otherwise in furtherance of the person's official duties.

"Candidate" means a person who has filed nominating papers or petitions for nomination or election to an elected office, or who has been appointed to fill a vacancy in nomination, and who remains eligible for placement on the ballot at a regular election, as defined in section 1-3 of the Election Code (10 ILCS 5/1-3).

"Collective bargaining" has the same meaning as that term is defined in Section 3 of the Illinois Public Labor Relations Act (5 ILCS 315/3).

"Compensated time" means, with respect to an employee, any time worked by or credited to the employee that counts toward any minimum work time requirement imposed as a condition of his or her

employment, but for purposes of this Ordinance, does not include any designated holidays, vacation periods, personal time, compensatory time off or any period when the employee is on a leave of absence. With respect to officers or employees whose hours are not fixed, "compensated time" includes any period of time when the officer is on premises under the control of the employer and any other time when the officer or employee is executing his or her official duties, regardless of location.

"Compensatory time off" means authorized time off earned by or awarded to an employee to compensate in whole or in part for time worked in excess of the minimum work time required of that employee as a condition of his or her employment.

"Contribution" has the same meaning as that term is defined in section 9-1.4 of the Election Code (10 ILCS 5/9-1.4).

"Employee" means a person employed by the Desplaines Valley Mosquito Abatement District, whether on a fulltime or part-time basis or pursuant to a contract, whose duties are subject to the direction and control of an employer with regard to the material details of how the work is to be performed, but does not include an independent contractor.

"Employer" means the Desplaines Valley Mosquito Abatement District.

"Gift" means any gratuity, discount, entertainment, hospitality, loan, forbearance, or other tangible or intangible item having monetary value including, but not limited to, cash, food and drink, and honoraria for speaking engagements related to or attributable to government employment or the official position of an officer or employee.

"Leave of absence" means any period during which an employee does not receive (i) compensation for employment, (ii) service credit towards pension benefits, and (iii) health insurance benefits paid for by the employer.

"Officer" means a person who holds, by election or appointment, an office created by statute or ordinance, regardless of whether the officer is compensated for service in his or her official capacity.

"Political activity" means any activity in support of or in connection with any campaign for elective office or any political organization, but does not include activities (i) relating to the support or opposition of any executive, legislative, or administrative action, (ii) relating to collective bargaining, or (iii) that are otherwise in furtherance of the person's official duties.

"Political organization" means a party, committee, association, fund, or other organization (whether or not incorporated) that is required to file a statement of organization with the State Board of Elections or a county clerk under Section 9-3 of the Election Code (10 ILCS 5/9-3), but only with regard to those activities that require filing with the State Board of Elections or a county clerk.

"Prohibited political activity" means:

- (1) Preparing for, organizing, or participating in any political meeting, political rally, political demonstration, or other political event.
- (2) Soliciting contributions, including but not limited to the purchase of, selling, distributing, or receiving payment for tickets for any political fundraiser, political meeting, or other political event.
- (3) Soliciting, planning the solicitation of, or preparing any document or report regarding anything of value intended as a campaign contribution.
- (4) Planning, conducting, or participating in a public opinion poll in connection with a campaign for elective office or on behalf of a political organization for political purposes or for or against any referendum question.

- (5) Surveying or gathering information from potential or actual voters in an election to determine probable vote outcome in connection with a campaign for elective office or on behalf of a political organization for political purposes or for or against any referendum question.
- (6) Assisting at the polls on election day on behalf of any political organization or candidate for elective office or for or against any referendum question.
- (7) Soliciting votes on behalf of a candidate for elective office or a political organization or for or against any referendum question or helping in an effort to get voters to the polls.
- (8) Initiating for circulation, preparing, circulating, reviewing, or filing any petition on behalf of a candidate for elective office or for or against any referendum question.
- (9) Making contributions on behalf of any candidate for elective office in that capacity or in connection with a campaign for elective office.
- (10) Preparing or reviewing responses to candidate questionnaires.
- (11) Distributing, preparing for distribution, or mailing campaign literature, campaign signs, or other campaign material on behalf of any candidate for elective office or for or against any referendum question.
- (12) Campaigning for any elective office or for or against any referendum question.
- (13) Managing or working on a campaign for elective office or for or against any referendum question.
- (14) Serving as a delegate, alternate, or proxy to a political party convention.
- (15) Participating in any recount or challenge to the outcome of any election.

"Prohibited source" means any person or entity who:

- (1) is seeking official action (i) by an officer or (ii) by an employee, or by the officer or another employee directing that employee;
- (2) does business or seeks to do business (i) with the officer or (ii) with an employee, or with the officer or another employee directing that employee;
- (3) conducts activities regulated (i) by the officer or (ii) by an employee, or by the officer or another employee directing that employee; or
- (4) has interests that may be substantially affected by the performance or non-performance of the official duties of the officer or employee.

ARTICLE 5

PROHIBITED POLITICAL ACTIVITIES

Section 5-1. Prohibited political activities. (a) No officer or employee shall intentionally perform any prohibited political activity during any compensated time, as defined herein. No officer or employee shall intentionally use any property or resources of the Desplaines Valley Mosquito Abatement District in connection with any prohibited political activity.

(b) At no time shall any officer or employee intentionally require any other officer or employee to perform any prohibited political activity (i) as part of that officer or employee's duties, (ii) as a condition of employment, or (iii) during any compensated time off (such as holidays, vacation or personal time off).

(c) No officer or employee shall be required at any time to participate in any prohibited political activity in consideration for that officer or employee being awarded additional compensation or any benefit, whether in the form of a salary adjustment, bonus, compensatory time off, continued employment or otherwise, nor shall any officer or employee be awarded additional compensation or any benefit in consideration for his or her participation in any prohibited political activity.

(d) Nothing in this Section prohibits activities that are permissible for an officer or employee to engage in as part of his or her official duties, or activities that are undertaken by an officer or employee on a voluntary basis which are not prohibited by this Ordinance.

(e) No person either (i) in a position that is subject to recognized merit principles of public employment or (ii) in a position the salary for which is paid in whole or in part by federal funds and that is subject to the Federal Standards for a Merit System of Personnel Administration applicable to grant-in-aid programs, shall be denied or deprived of employment or tenure solely because he or she is a member or an officer of a political committee, of a political party, or of a political organization or club.

ARTICLE 10 GIFT BAN

Section 10-1. Gift ban. Except as permitted by this Article, no officer or employee, and no spouse of or immediate family member living with any officer or employee (collectively referred to herein as "recipients"), shall intentionally solicit or accept any gift from any prohibited source, as defined herein, or which is otherwise prohibited by law or ordinance. No prohibited source shall intentionally offer or make a gift that violates this Section.

Section 10-2. Exceptions. Section 10-1 is not applicable to the following:

- (1) Opportunities, benefits, and services that are available on the same conditions as for the general public.
- (2) Anything for which the officer or employee, or his or her spouse or immediate family member, pays the fair market value.
- (3) Any (i) contribution that is lawfully made under the Election Code or (ii) activities associated with a fundraising event in support of a political organization or candidate.
- (4) Educational materials and missions.
- (5) Travel expenses for a meeting to discuss business.
- (6) A gift from a relative, meaning those people related to the individual as father, mother, son, daughter, brother, sister, uncle, aunt, great aunt, great uncle, first cousin, nephew, niece, husband, wife, grandfather, grandmother, grandson, granddaughter, father-in-law, mother-in-law, son-in-law, daughter-in-law, brother-in-law, sister-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, and including the father, mother, grandfather, or grandmother of the individual's spouse and the individual's fiancé or fiancée.
- (7) Anything provided by an individual on the basis of a personal friendship unless the recipient has reason to believe that, under the circumstances, the gift was provided because of the official position or employment of the recipient or his or her spouse or immediate family member and not because of the personal friendship. In determining whether a gift is provided on the basis of personal friendship, the recipient shall consider the circumstances under which the gift was offered, such as: (i) the history of the relationship between the individual giving the gift and the recipient of the gift, including any previous exchange of gifts between those individuals; (ii) whether to the actual knowledge of the recipient the individual who gave the gift personally paid for the gift or sought a tax deduction or business reimbursement for the gift; and (iii) whether to the actual knowledge of the recipient the individual who gave the gift also at the same time gave the same or similar gifts to other officers or employees, or their spouses or immediate family members.
- (8) Food or refreshments not exceeding \$75 per person in value on a single calendar day; provided that the food or refreshments are (i) consumed on the premises from which they were purchased or

prepared or (ii) catered. For the purposes of this Section, "catered" means food or refreshments that are purchased ready to consume which are delivered by any means.

(9) Food, refreshments, lodging, transportation, and other benefits resulting from outside business or employment activities (or outside activities that are not connected to the official duties of an officer or employee), if the benefits have not been offered or enhanced because of the official position or employment of the officer or employee, and are customarily provided to others in similar circumstances.

(10) Intra-governmental and inter-governmental gifts. For the purpose of this Act, "intragovernmental gift" means any gift given to an officer or employee from another officer or employee, and "inter-governmental gift" means any gift given to an officer or employee by an officer or employee of another governmental entity.

(11) Bequests, inheritances, and other transfers at death.

(12) Any item or items from any one prohibited source during any calendar year having a cumulative total value of less than \$100.

Each of the exceptions listed in this Section is mutually exclusive and independent of every other.

Section 10-3. Disposition of gifts. An officer or employee, his or her spouse or an immediate family member living with the officer or employee, does not violate this Ordinance if the recipient promptly takes reasonable action to return a gift from a prohibited source to its source or gives the gift or an amount equal to its value to an appropriate charity that is exempt from income taxation under Section 501 (c)(3) of the Internal Revenue Code of 1986, as now or hereafter amended, renumbered, or succeeded.

**ARTICLE 15
ETHICS ADVISOR**

Section 15-1. The President, Board of Trustees, with the advice and consent of the Board of Trustees shall designate an Ethics Advisor for the Desplaines Valley Mosquito Abatement District. The duties of the Ethics Advisor may be delegated to an officer or employee of the Desplaines Valley Mosquito Abatement District unless the position has been created as an office by the Desplaines Valley Mosquito Abatement District.

Section 15-2. The Ethics Advisor shall provide guidance to the officers and employees of the Desplaines Valley Mosquito Abatement District concerning the interpretation of and compliance with the provisions of this Ordinance and State ethics laws. The Ethics Advisor shall perform such other duties as may be delegated by the Board of Trustees.

**ARTICLE 20
ETHICS COMMISSION**

Section 20-1. There is hereby created a commission to be known as the Ethics Commission of the Desplaines Valley Mosquito Abatement District. The Commission shall be comprised of three members appointed by the President, Board of Trustees with the advice and consent of the Board of Trustees. No person shall be appointed as a member of the Commission who is related, either by blood or by marriage up to the degree of first cousin, to any elected officer of the Desplaines Valley Mosquito Abatement District.

Section 20-2. At the first meeting of the Commission, the initial appointees shall draw lots to determine their initial terms. Two commissioners shall serve 2-year terms, and the third commissioner shall serve a one-year term. Thereafter, all commissioners shall be appointed to 2- year terms. Commissioners may be reappointed to serve subsequent terms.

At the first meeting of the Commission, the commissioners shall choose a chairperson from their number. Meetings shall be held at the call of the chairperson or any 2 commissioners. A quorum shall consist two commissioners, and official action by the commission shall require the affirmative vote of two members.

Section 20-3. The President, Board of Trustees, with the advice and consent of the Board of Trustees, may remove a commissioner in case of incompetency, neglect of duty or malfeasance in office after service on the commissioner by certified mail, return receipt requested, of a copy of the written charges against the commissioner and after providing an opportunity to be heard in person or by counsel upon not less than 10 days' notice. Vacancies shall be filled in the same manner as original appointments.

Section 20-4. The Commission shall have the following powers and duties:

- (1) To promulgate procedures and rules governing the performance of its duties and the exercise of its powers.
- (2) Upon receipt of a signed, notarized, written complaint, to investigate, conduct hearings and deliberations, issue recommendations for disciplinary actions, impose fines in accordance with Section 25-1(c) of this Ordinance and refer violations of Article 5 or Article 10 of this Ordinance to the appropriate attorney for prosecution. The Commission shall, however, act only upon the receipt of a written complaint alleging a violation of this Ordinance and not upon its own prerogative.
- (3) To receive information from the public pertaining to its investigations and to require additional information and documents from persons who may have violated the provisions of this Ordinance.
- (4) To compel the attendance of witnesses and to compel the production of books and papers pertinent to an investigation. It is the obligation of all officers and employees of the Desplaines Valley Mosquito Abatement District to cooperate with the Commission during the course of its investigations. Failure or refusal to cooperate with requests by the Commission shall constitute grounds for discipline or discharge.
- (5) The powers and duties of the Commission are limited to matters clearly within the purview of this Ordinance.

Section 20-5. (a) Complaints alleging a violation of this Ordinance shall be filed with the Ethics Commission.

(b) Within 3 business days after the receipt of a complaint, the Commission shall send by certified mail, return receipt requested, a notice to the respondent that a complaint has been filed against him or her and a copy of the complaint. The Commission shall send by certified mail, return receipt requested, a confirmation of the receipt of the complaint to the complainant within 3 business days after receipt by the commission. The notices to the respondent and the complainant shall also advise them of the date, time, and place of the meeting to determine the sufficiency of the complaint and to establish whether probable cause exists to proceed.

(c) Upon not less than 48 hours' public notice, the Commission shall meet to review the sufficiency of the complaint and, if the complaint is deemed sufficient to allege a violation of this Ordinance, to determine whether there is probable cause, based on the evidence presented by the complainant, to proceed. The meeting may be closed to the public to the extent authorized by the Open Meetings Act. The Commission shall issue notice to the complainant and the respondent of the Commission's ruling on the sufficiency of the complaint and, if necessary, on probable cause to proceed within 7 business days after receiving the complaint.

If the complaint is deemed sufficient to allege a violation of Article 10 of this Ordinance and there is a determination of probable cause, then the Commission's notice to the parties shall include a hearing date scheduled within 4 weeks after the complaint's receipt. Alternatively, the Commission may elect to notify in writing the attorney designated by the corporate authorities to prosecute such

actions and request that the complaint be adjudicated judicially. If the complaint is deemed not sufficient to allege a violation or if there is no determination of probable cause, then the Commission shall send by certified mail, return receipt requested, a notice to the parties of the decision to dismiss the complaint, and that notice shall be made public.

If the complaint is deemed sufficient to allege a violation of Article 5 of this Ordinance, then the Commission shall notify in writing the attorney designated by the corporate authorities to prosecute such actions and shall transmit to the attorney the complaint and all additional documents in the custody of the Commission concerning the alleged violation.

(d) On the scheduled date and upon at least 48 hours' public notice of the meeting, the Commission shall conduct a hearing on the complaint and shall allow both parties the opportunity to present testimony and evidence. The hearing may be closed to the public only if authorized by the Open Meetings Act.

(e) Within 30 days after the date the hearing or any recessed hearing is concluded, the Commission shall either (i) dismiss the complaint or (ii) issue a recommendation for discipline to the alleged violator and to the President, Board of Trustees, or impose a fine upon the violator, or both. The particular findings in the case, any recommendation for discipline, and any fine imposed shall be a matter of public information.

(f) If the hearing was closed to the public, the respondent may file a written demand for a public hearing on the complaint within 7 business days after the issuance of the recommendation for discipline or imposition of a fine, or both. The filing of the demand shall stay the enforcement of the recommendation or fine. Within 14 days after receiving the demand, the Commission shall conduct a public hearing on the complaint upon at least 48 hours' public notice of the hearing and allow both parties the opportunity to present testimony and evidence. Within 7 days thereafter, the Commission shall publicly issue a final recommendation to the alleged violator and to the President, Board of Trustees or impose a fine upon the violator, or both.

(g) If a complaint is filed during the 60 days preceding the date of any election at which the respondent is a candidate, the Commission shall render its decision as required under subsection (e) within 7 days after the complaint is filed, and during the 7 days preceding that election, the Commission shall render such decision before the date of that election, if possible.

(h) The Commission may fine any person who intentionally violates any provision of Article 10 of this Ordinance in an amount of not less than \$1,001 and not more than \$5,000. The Commission may fine any person who knowingly files a frivolous complaint alleging a violation of this Ordinance in an amount of not less than \$1,001 and not more than \$5,000. The Commission may recommend any appropriate discipline up to and including discharge.

(i) A complaint alleging the violation of this Act must be filed within one year after the alleged violation.

ARTICLE 25 PENALTIES

Section 25-1. Penalties. (a) A person who intentionally violates any provision of Article 5 of this Ordinance may be punished by a term of incarceration in a penal institution other than a penitentiary for a period of not more than 364 days, and may be fined in an amount not to exceed \$2,500.

(b) A person who intentionally violates any provision of Article 10 of this Ordinance is subject to a fine in an amount of not less than \$1,001 and not more than \$5,000.

(c) Any person who intentionally makes a false report alleging a violation of any provision of this Ordinance to the local enforcement authorities, the State's Attorney or any other law enforcement

official may be punished by a term of incarceration in a penal institution other than a penitentiary for a period of not more than 364 days, and may be fined in an amount not to exceed \$2,500.

(d) A violation of Article 5 of this Ordinance shall be prosecuted as a criminal offense by an attorney for the Desplaines Valley Mosquito Abatement District by filing in the circuit court an information, or sworn complaint, charging such offense. The prosecution shall be under and conform to the rules of criminal procedure. Conviction shall require the establishment of the guilt of the defendant beyond a reasonable doubt.

A violation of Article 10 of this Ordinance may be prosecuted as a quasi-criminal offense by an attorney for the Desplaines Valley Mosquito Abatement District, or, if an Ethics Commission has been created, by the Commission through the designated administrative procedure.

(e) In addition to any other penalty that may be applicable, whether criminal or civil, an officer or employee who intentionally violates any provision of Article 5 or Article 10 of this Ordinance is subject to discipline or discharge.

SECTION 2: This Ordinance shall be in effect upon its passage, approval and publication as provided by law.

PASSED by the Board of Trustees of the Desplaines Valley Mosquito Abatement District this 15th day of March, 2012, A.D. pursuant to roll call vote as follows:

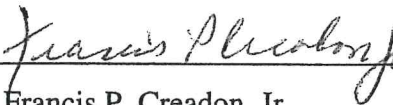
Ayes: 4

Nays: 0

Absent: 1

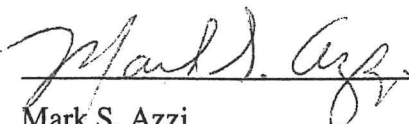
APPROVED this 15th day of March, 2012, A.D.

PUBLISHED this 15th day of March, 2012, A.D. in pamphlet form.



Francis P. Creadon, Jr.
President, Board of Trustees

ATTEST:



Mark S. Azzi
Secretary, Board of Trustees

**ORDINANCE NO. 2012-3-2
CREDIT CARD POLICY**

**AN ORDINANCE BY THE BOARD OF TRUSTEES OF THE
DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT
ADOPTING A SYSTEM FOR THE ISSUANCE, USE AND
CONTROL OF CREDIT CARDS BY DISTRICT OFFICIALS
AND EMPLOYEES.**

WHEREAS, the Board of Trustees of the Desplaines Valley Mosquito Abatement District finds it advantageous for the District to use a credit card for certain official District purchases; and

WHEREAS, the District finds that the use of credit cards is a customary and economical business practice to improve cash management, reduce costs and increase efficiency; and

WHEREAS, the District strives to perform all functions in an efficient and cost effective manner.

NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT, COUNTY OF COOK, STATE OF ILLINOIS:

SECTION 1. Credit Card Use

A) Definition. As used in this ordinance, "credit card" means a card or device issued under an agreement pursuant to which the issuer gives to a cardholder, the privilege of obtaining credit from the user.

B) Issuance, use and control of credit cards.

1. *Distribution* - Credit cards may be distributed to those District officials and employees who, in the opinion of the Board of Trustees, have job responsibilities that would benefit or otherwise be facilitated by use of a credit card.
2. *Authorization and Control* - The credit card is to be used when it is in the best interest of the District. Any purchases are to fall under existing District administrative guidelines and accounting controls.
3. *Application* - The individual cardholder shall hold the credit card responsibly. A purchase made with a credit card may be made in-store, by telephone, fax, internet, or U.S. mail.
4. *Credit Limits* - The Board of Trustees shall set credit limits on each credit card issued.
5. *Payment of Bills* - The payment of all credit card bills will fall under existing administrative guidelines and accounting controls.

6. *Unauthorized Charges* - The following will be considered an unauthorized use of any District-issued credit card:

- a) Cash advances
- b) Payment of invoices or statements

Any District official or employee using a District-issued credit card for non-District business shall be billed for all such charges on the credit card. Payment of such charges will be made before the charge card billing is due. Failure to do so will render the cardholder personally liable where the District shall have a prior lien against and a right to withhold any and all fund payable or to become payable to the employee up to the unpaid amount, plus interest and/or fees at the rate charged by the bank that issued the const.

7. *Return of Credit Card* - The cardholder shall return any District-issued credit card at the request of the Board of Trustees, or upon separation of employment.

SECTION 2 - If any section, paragraph, clause or phrase of this Ordinance is for any reason held to be unconstitutional or invalid, such decision shall not affect the validity of the remaining portions of this Ordinance.

SECTION 3 - This Ordinance shall take effect and be in full force from and after its passage and approval.

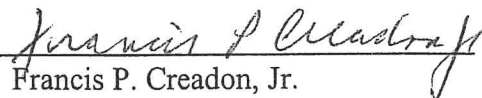
PASSED by the Board of Trustees of the Desplaines Valley Mosquito Abatement District this 15th day of March , 2012, A.D. pursuant to roll call vote as follows:

Ayes: 4

Nays: 0

Absent: 1

APPROVED this 15th day of March , 2012, A.D.


 Francis P. Creadon, Jr.
 President, Board of Trustees

ATTEST:


 Mark S. Azzi
 Secretary, Board of Trustees



**Best Management Practices
for the Integrated Pest Management of Mosquitoes**

Desplaines Valley Mosquito Abatement District Best Management Practices for the Integrated Pest Management of Mosquitoes

I. Introduction

Illinois has been associated with mosquitoes and mosquito-borne diseases since before it was a state. In fact Illinois was known to those in the East as the “Graveyard of the Nation” because of significant levels of malaria well into the 1920s particularly in central and southern regions. In the early 1920s mosquito control was initiated primarily through the use of drainage to reduce the number of mosquitoes carrying malaria in central and southern areas, as well as to abate nuisance mosquitoes in the Chicago area. These mosquito abatement efforts were so successful that the Illinois legislature created procedures for the establishment of mosquito abatement districts (MADs) in 1927. The Desplaines Valley Mosquito Abatement District (DVMAD) is one of the two original districts established in 1927.

Over the years as knowledge of mosquito biology has increased, new and varied methods of mosquito control have emerged. In particular, the concept of integrated pest management (IPM) which uses a variety of control methods integrated together into an overall strategy has been developed. IPM in mosquito abatement is knowledge based and surveillance driven. The goal is to maximize the abatement of mosquitoes to protect humans from mosquito-borne diseases as well as reduce mosquito annoyance while minimizing the impact on the environment.

Following are the District’s Best Management Practices (BMP) for the implementation of our IPM strategies.

II. Surveillance

Surveillance is the essential first step in the integrated pest management of mosquitoes. Surveillance of a variety of factors help identify what kinds of mosquito problems are developing, their location, what species are involved, and what potential exists for the transmission of disease. Surveillance also helps determine what control methods are most appropriate for those conditions at that time. Following are the types of surveillance that the District currently uses.

A. Weather

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. Temperatures will also affect the rate at which mosquito-borne disease will develop and amplify in the mosquito population. The District monitors rainfall, temperature, and other weather data at six locations throughout the district. Weather data is also obtained from the National Weather Service based at O’Hare Airport directly north of the District.

B. Larvae Density and Identification

Larval mosquito surveys are conducted on a regular basis to determine the extent, type, and concentration of mosquito populations within the District. The density of mosquito larvae (average number per dip) is recorded for each open water source at the time of inspection. A sample of the mosquito larvae are collected by the General Larval crews from the source and are brought back to the laboratory for identification down to species. The instar levels are also noted to track the progress of mosquito development over time. 4th instar larvae are also collected from gravid traps and identified down to species. In addition, larvae from a sample of street catch basins and off-road basins are periodically collected and identified down to species.

C. Adult Mosquitoes

Adult mosquito populations are monitored using 8 New Jersey Light Traps and 18 Gravid Traps distributed throughout the District. Both trap types are operated nightly, 7 days per week from early May through mid-October. Samples are collected Monday - Friday, counted, and identified down to species.

D. Disease Presence

Culex species of mosquitoes are the primary vectors of mosquito-borne diseases such as West Nile Virus (WNV) and Saint Louis Encephalitis (SLE) within the District. Gravid traps are specialized traps that collect live, gravid adult female mosquitoes, primarily *Culex* species. Because they have taken a blood meal, it is more likely that they have been exposed to disease organisms if present. The District tests for the presence and abundance of infected mosquitoes using RT-PCR (Real Time Polymerase Chain Reaction) system to perform West Nile Virus testing of mosquito samples. These tests are conducted in a Class II Biological Safety Cabinet to ensure the safety of the laboratory staff. The results from these tests are used to determine if, when, and where adult mosquito control is warranted.

E. Search for new/changed open water sources, catch basins, or off-road basins

Field personnel are always on the lookout for new or changed open water sources as well as additions of or changes to the street catch basins and off-road basins. New construction is tracked to see if new sources develop. Sources that no longer exist are removed from maps and inspection/treatment routes.

III. Maps

The District has determined that the use of computerized maps allows for proper pesticide application and limits mistakes by the seasonal crew. The entire District is divided into smaller sections and each section has a specific map. This makes the mosquito sources throughout the District more manageable. A variety of maps are utilized to best manage and treat the different types of sources throughout the District. District maps are updated frequently throughout the mosquito and non-mosquito season. The type of map used is dependent upon the type of source. *See full-district map in attachments.*

A. General Larval Maps

General larval maps are utilized to properly find and treat open water sources. Each open water source is individually represented on District maps. This allows seasonal crews to go from source to source, inspecting and if necessary, using pesticide to treat for mosquitoes. During the 2022 mosquito season the District began using handheld Global Positioning System (GPS) devices to plot and locate mosquito breeding sources. Using the handheld GPS devices, in conjunction with the paper maps, to locate sources will greatly increase efficiency especially for newly hired seasonal employees. *See sample map in attachments.*

1. Open water sources (>2,200 throughout the District) are individually numbered on maps for ease of identification.
2. The estimated size and shape of each source is represented on the maps.
3. Specific details are added to the maps to show how and where to access the difficult to find open water sources, e.g., walking trails, driving trails, fences, tree lines, etc.

4. Each crew follows the numbered open water sources on the map using a pre-determined route. Some sources have specific instructions for location or pesticide treatment. These details are included on the route form. *See sample route form in attachments.*

B. Off-Road Basin Maps

Off-road basin maps are utilized to properly find and treat basins that must be accessed by foot. *See sample map in attachments.*

1. Geographic Information System (GIS) is used by the District to locate Off-Road Basins. Basins are plotted on tablet computers which allows for efficient and thorough treatments.
2. Computerized paper maps are used to supplement GIS. These maps contain individual notes and street addresses to assist in locating basins.

C. Catch Basin Maps

Catch basin maps are utilized to properly find and treat street basins throughout the District. *See sample map in attachments.*

1. Individual streets and alleys that have catch basins (>45,000 throughout the District) are marked on the map.
2. District and section boundaries are clearly marked on the map to show drivers what side of the street to treat. This helps to avoid double treatment on streets that separate sections.
3. The plotting of catch basins using GIS tablets is in process.

D. Adult Control Maps

Adult control maps are utilized to properly spray residential areas for the control of adult mosquitoes. *See sample map in attachments.*

1. When adult control is conducted, each residential area has a specific map and route to follow. This ensures drivers remain in their assigned area and double spraying is eliminated.
2. Details on the adult route maps show drivers exactly where spraying should be conducted. Those details are:
 - a. Individual start and end points in which spraying is to be conducted.
 - b. Arrows on the maps guide drivers through their assigned routes. The arrows are color coded in order to indicate which streets are to be sprayed, ensuring proper coverage and eliminating double spraying.

E. Drainage and Rock Filter Maps

Drainage and rock filter maps are utilized to find and keep track of open water sources that contain drainage and rock filter systems.

1. The maps indicate where sump basins are buried, and where rock filters and outlets are located. This allows for easy cleaning and maintenance of these systems.

IV. Set Action Thresholds

The decision to begin or continue any mosquito control measure must be based on surveillance data. The District has a large quantity of historical data that is used to determine what procedures are most appropriate and when necessary, which pesticides should be used. Following are the action thresholds used by the District to initiate various mosquito control methodologies.

A. Larval Control Thresholds

1. Open Water Sources

Open water mosquito sources are inspected on a 10-14 day interval or a 30 day interval for pre-hatch treatments. For sources on a 10-14 day interval, upon inspection, if the source is found to have an average of less than one larva or less than five pupae per dip then the source will not be treated. Otherwise if there are one or more larvae or five or more pupae per dip then treatment with one of the approved pesticides will be initiated. This density criteria is applied in the majority of circumstances, however, some discretion is needed for unique circumstances that may necessitate deviation from the larval thresholds described above. For sources that are best addressed through the use of a pre-hatch treatment, the threshold for treatment is based on the history of the site when climatic conditions allow mosquito development to begin. These sites are treated with an extended release pesticide and re-treated when the label's effective period is over if the site has filled with water during the previous effective period. Open water sources in the Forest Preserve District and floodplains throughout the District are treated for larvae only.

2. Street and Off-Road Catch Basins

Catch basins generally begin to show signs of egg laying and larval development from mid- to late-May. From that point on they will provide continuous production of *Culex* mosquitoes if left untreated. For both categories of catch basins, the action threshold will be the appearance of egg rafts or larvae in a sampling of basins which will trigger the initiation of treatment with slow release formulations of pesticide followed by periodic re-treatment of all basins for the duration of the mosquito season. The frequency of treatment will be determined by the formulation of the pesticide used.

B. Adult Control Thresholds

The District does not use adult mosquito control for the control of nuisance mosquitoes. It is initiated only in response to an increased risk of disease transmission in particular WNV. Please see the attached document entitled: "*Criteria for initiating contingency adult mosquito control measures*" for treatment thresholds. There are circumstances where someone with a medical condition should not be exposed to pesticides. Please see the attached document entitled: "*Criteria for requesting adult mosquito 'No-Spray' area*" for residents who need to avoid pesticide exposure.

V. Licensing and Training

A. Licensing

Employees that are responsible for handling or applying pesticides may be required to obtain an Operator License from the Illinois Department of Agriculture (IDA) by passing the *General Standards* exam. Once the test is passed, the employee is licensed to apply pesticides for mosquito control. Catch basin and off-road basin employees only apply a specific type of pesticide that is in a briquet and inget formulation. The certification required for these employees by the IDA is to complete the Solid, Single-use Larvicide Training Course. In addition to obtaining an Operator License, full-time employees responsible for the training of seasonal crews must obtain an Applicator License in the category of Mosquito Control.

B. Training

Employees, once they are licensed by the Illinois Department of Agriculture, are then trained in the responsibilities of their division. Training of all new personnel continues until they demonstrate full competence in performance of required job responsibilities.

1. All field crews are trained in the safe handling and use of the pesticides used in mosquito control.
2. All field crews are trained to correctly use the different types of pesticide application equipment utilized by the District.
3. Proper application rate of pesticides is continuously stressed throughout the training of all field crews.
4. General Larval crews are trained to identify larvae and pupae found in open water sources. In addition, General Larval crews are trained to properly calculate dip counts in order to satisfy larval control thresholds for pesticide treatment.
5. All field crews are trained to properly complete daily paperwork. This allows for accurate record keeping of amount of pesticide used, the location where pesticides have been applied, and other important information.

VI. Mosquito Control

The District uses a variety of different methods in order to maximize control.

A. Source Reduction/Physical Control

This is the most effective method in controlling mosquitoes but is not practical with all mosquito sources. The following are the methods the District implements.

1. "Fly-dumped" tires (tires that are illegally dumped - often along roads, in ditches, or in the forest preserves) are collected on a dedicated basis twice a year in the spring and fall, and are collected throughout the mosquito season as they are found. The tires collected are picked up and are taken to be recycled, with the Illinois Environmental Protection Agency (IEPA) funding their proper disposal. Collecting old tires is a meaningful way of eliminating developmental sites for the *Culex* mosquito which have the ability to carry and transmit disease.
2. There are many ditches and rock filters throughout the District that provide drainage of open water sources that range in size from large floodplains to small woodland pools. Ditches and rock filters are cleaned of debris on a regular basis and as necessary throughout the mosquito season. This allows open water sources to drain more quickly, significantly reducing the amount of water for mosquitoes to develop. Reducing the amount of water also reduces the amount of pesticide needed to control mosquitoes in the remaining water.
3. The District cooperates with villages, public works, and businesses to identify and remove or treat mosquito sources.

- a. Communication about the location of unmaintained swimming pools, tires, artificial containers, abandoned properties, etc. allows for the proper disposal or removal of the problematic source. Treatment of the problematic source will be carried out by the District if it cannot be eliminated.
- b. Informing villages, public works and businesses about keeping retention areas and ditches clean of debris and maintained in order to provide proper drainage. This also reduces the need for pesticide treatment.

B. Biological Control

1. The use of mosquito eating fish can be an effective way of controlling mosquitoes in ornamental ponds that continuously hold water. The use of non-native fish, such as *Gambusia*, is frowned upon by the Forest Preserve District, and in any body of water where it is possible for the fish to enter natural waters. The District has attempted to utilize fish native to the region with no success.

Due to the fact that mosquito fish are increasingly hard to acquire in large quantities, the District no longer keeps them in stock. Residents with ornamental ponds on their property are advised to purchase mosquito eating fish if possible, or to call the District for pesticide treatment.

2. Current available research has found that the use of bats, birds, dragonflies and other predators of mosquitoes is ineffective and are not used or recommended by the District.

C. Pesticide Control

Pesticides used by the District are registered by the United States Environmental Protection Agency (USEPA) and the Illinois Department of Agriculture (IDA) and are used in accordance with product label specifications. In addition all employees that are responsible for handling or applying pesticides must be licensed by the IDA.

1. Emphasis on proper application rate of pesticide is stressed during the training of seasonal employees rather than attempting to estimate source size and calculating amount of pesticide to use. It has been determined that estimating the size of an open water source varies greatly between employees and will often result in the incorrect amount of pesticide being applied. Field crews take a measurement of pesticide before and after a treatment to determine how much pesticide was used on each individual open water source. Open water sources sizes and shapes change constantly depending on rainfall amounts and evaporation rate. The District maintains a database of the approximate maximum size (AMS) of each open water source within the District since it is not feasible to measure each source at the time of treatment.

2. Immature mosquitoes develop in water, because of this, the most effective effort is larval control. Larval control is the primary focus of the District which focuses on mosquitoes developing in water before they emerge into the adult stage. The District contains many different types of mosquito sources. Because of this, the District is divided into divisions. Each division is responsible for their particular source type. Following are the divisions and their responsibilities:

a. Street Catch Basin Division

Catch Basin crews are responsible for the pesticide treatment of all street catch basins throughout the District. The District has more than 45,000 street catch basins. Their goal is to treat all basins three times. For the first two treatments, a 30 day extended control briquet will

be applied in 21-28 day intervals. The third and final treatment will occur 21-28 days later with the application of a 150 day extended control inget.

b. Off-Road Basin Division (ORB)

Off-road basin crews are responsible for the pesticide treatment of all ORB's throughout the District. An ORB is any basin that cannot be accessed by vehicle and needs to be accessed by foot. The District has more than 6,200 ORB's. The goal of the off-road basin division is to treat all basins twice with a 150-day extended control inget.

c. General Larval Division

General larval crews are responsible for the inspection and pesticide treatment of all open water sources throughout the District. Typical open water sources that are treated are artificial containers, ditches, ponds, swamps, floodplains, etc. The District has more than 2,200 open water sources. The goal of general larval is to inspect, and if mosquitoes are found and thresholds are met, treat the highest priority open water sources every 10-14 days with BTI granules or BVA2 oil, or every 30 days with Altosid pellets.

Open water sources are evaluated based on difficulty, ease of access to treat, and percentage of time the source is found to be developing mosquitoes. Each source is then placed on a specific route that each summer crew follows. Source prioritization is as follows:

- High Priority Route – develops mosquitoes more than 10% of the time, these are the most crucial open water sources.
- Marginal Priority Route – develops mosquitoes less than 10% of the time.
- High Water Route – this route is utilized after a large rain event, and focuses on floodwater sources that can produce large amounts of floodwater mosquitoes.
- Special Priority Routes – harder to find or more difficult to treat open water sources. These sources are often treated for extended control.

In an effort to avoid mosquito resistance, the District periodically evaluates pesticides with a different mode of action. Evaluating the safety and efficacy of pesticides will determine if there will be an expanded use of a different pesticides in the future.

d. Pesticides are chosen by the District based on safety, efficacy and their ability to avoid mosquito resistance. The District uses the following pesticides for larval control:

- Altosid Briquet Mosquito Growth Regulators are used for extended control. The briquets are designed to slowly release effective levels of the mosquito growth regulator Methoprene. The District uses two different formulations of Altosid Briquets, a 30 day and a 150 day extended release inget. The preferred method to treat street catch basins and off-road basins is to use Altosid Briquets. The briquets are applied by hand in each individual basin throughout the District.
- Fourstar Sustained Release Microbial Briquets are used for extended control. The briquets are designed to slowly release effective levels of *Bacillus Sphaericus* and *Bacillus thuringiensis israelensis*. The District uses three different formulations of Fourstar, a 45 day, 90 day, and a 180 day briquet. The briquets are applied by hand in individual basins.
- Altosid Pellets are used for extended control. The pellets are designed to release an effective level of the mosquito growth regulator Methoprene for up to 30 days. The pellets are used in difficult to treat and hard to access open water sources and allows for long term control of

developing mosquitoes in these areas. A motorized backpack sprayer is utilized to apply the pellets.

- *Bacillus thuringiensis israelensis* (BTI) granules are used in most open water sources to control mosquito larvae. BTI is applied utilizing a motorized backpack sprayer for large mosquito sources and applied by hand for smaller sources. It is preferred by the District to use BTI whenever possible, because of its specificity of targeting mosquito larvae, with little or no effect on non-target organisms.

- *Bacillus thuringiensis israelensis* (BTI) liquid is used in open water sources to control mosquito larvae. BTI liquid is applied using a pressurized hand sprayer. It is preferred by the District to use BTI whenever possible, because of its specificity of targeting mosquito larvae, with little or no effect on non-target organisms.

- BVA 2 (a highly refined oil) produces a film of oil on top of the water surface that inhibits mosquito larvae and pupae from obtaining oxygen (breathing) resulting in their suffocation. It is applied using a pressurized hand sprayer.

3. Equipment maintenance and calibration is an important part of mosquito control. Keeping equipment maintained and calibrated correctly, helps ensure that the proper amount of pesticide is being applied. All equipment is cleaned, maintained and stored in the non-mosquito season. Equipment is calibrated when the mosquito season begins, and is calibrated and maintained as the need arises during the mosquito season.

4. The District takes pesticide safety very seriously and has several measures in place for spill prevention.

a. The mixing of pesticides is only conducted by a properly trained and licensed full-time employee.

b. A specially designed hopper is used to transfer 40lb bags of BTI granules into individual, more manageable, 10lb jugs. This minimizes spillage and eliminates the use of 40lb bags by field crews.

c. In the event a spill may occur, all District vehicles are equipped with absorption materials.

d. Mounted pesticide tanks on District vehicles are corrosion resistant and have multiple shut-off valves to avoid leaks and spills.

e. Safety Data Sheets (SDS) and pesticide labels are carried in all District vehicles that utilize pesticides.

5. The District periodically evaluates pesticides with a different mode of action in an effort to avoid mosquito resistance. Evaluating the safety and efficacy of new pesticides will determine if there will be an expanded use of new pesticides in the future.

D. Adult Control

Residential adult control is the least-effective approach to mosquito control and is only implemented as a contingency measure for vector related mosquitoes when disease thresholds are reached.

1. An ultra-low volume pesticide aerosol application process is utilized in all adult control operations.

2. All truck-mounted equipment utilized by the District is equipped with automatic flow control which directly regulates pesticide application to vehicle speed, thus ensuring accurate application rates.
3. Adult control operations are only conducted when environmental constraints are satisfied to optimize effectiveness.
 - a. Ambient air temperature between 65-85 deg F
 - b. Wind speed is in the 2-8 mph range
 - c. Adult control is conducted from dusk to midnight or 3AM to 6AM, in the hours that adult mosquitoes are most active.
4. Duet Dual-Action Adulticide is what the District applies when conducting adult control operations.

VII. Monitoring for Efficacy/Resistance

The District utilizes a variety of methods to monitor efficacy and to avoid resistance.

A. Post Inspection

Checking back on previously treated sources is important in achieving the following:

1. Ensuring the proper amount of pesticide is being used.
2. Inspecting the source to see if desired effect was achieved.
3. Inspecting the source to determine if mosquito resistance is occurring.
4. Inspecting for any adverse effects that could possibly occur.

B. Pesticide Rotation

In an effort to avoid mosquito resistance to pesticides, the District uses different classes of pesticides throughout the mosquito season.

VIII. Education and Community Outreach

The District tries to inform and educate the public in many different ways.

A. Pamphlets and Handouts

Pamphlets and handouts have been created as an educational tool and to inform the public about District practices, goals, and methods, used to control mosquitoes. In addition, the pamphlets and handouts help educate residents on what they can do to protect themselves from disease, and eliminate mosquito sources on their property. The pamphlets and handouts the District uses are as follows:

1. "Mosquitoes and Disease in Northern Illinois"
2. "Desplaines Valley Mosquito Abatement District"

3. “West Nile Virus and Mosquitoes”
4. Rain barrel handouts
5. Mosquito informational posters

Pamphlets and handouts are mailed to residents and homeowners on request and are handed out by field crews when encountered by residents. They are also distributed to village halls and local libraries for use in pamphlet racks.

B. DVMAD Website

The DVMAD Website, dvmad.org was created as an informational and educational tool for residents, and is updated frequently throughout the mosquito season. Following are examples of the type of information offered on the website:

1. District news, updated as necessary, is used to inform residents of what currently is occurring in the District. Updates can include:
 - a. Large rainfall events and increasing numbers of nuisance mosquitoes.
 - b. Virus activity throughout the District.
 - c. Tentatively scheduled adult mosquito control activities, dependent on weather conditions.
2. Homeowner tips to educate residents on what they can do to protect themselves from disease and eliminate mosquito sources on their property.
3. Detailed information on West Nile Virus and the *Culex* mosquitoes which can transfer the disease.
4. Links to other mosquito control agencies and public health departments.
5. Photo galleries showing examples of different types of mosquito sources, surveillance, and treatment practices of the District.
6. Contact e-mail for residents to inform the District about standing water, un-maintained swimming pools, and mosquito annoyance.

C. Presentations

Presentations are occasionally made by District personnel at village meetings and civic groups. These presentations help inform residents and villages on District practices. In addition, the presentations help educate about personal protection and eliminating standing water where possible.

D. Cooperative Efforts with Villages

The District works with villages in providing the information they request. Maps of mosquito breeding sources, data on treatment dates, and frequency of pesticide treatments are all made available to villages. Also, the District helps in providing information for village newsletters.

E. News Media Press Releases

The use of news media press releases allows the District to reach many residents at once to inform them about virus activity, heavy rainfall events that can result in large numbers of nuisance mosquitoes, personal protection, and what they can do to help eliminate standing water on their property.

F. News Media Requests for Information

Periodically throughout the mosquito season, news media outlets request information/interviews for a news story about mosquitoes. The District provides information on District practices, how residents can protect themselves from mosquitoes, and eliminating standing water where possible.

G. Social Media

The DVMAD Facebook page was created as an informational tool for residents and a recruiting tool for future employees. The Facebook page is updated frequently throughout the mosquito season informing residents of mosquito control activities. The page is also utilized in late winter and early spring to help recruit seasonal employees.

IX. Record Keeping

The District generates a great quantity of data which is stored in a computer database system capable of retrieving data as needed and the generation of reports. The reports generated from the collected data are used to assess the results and efficacy of mosquito reduction efforts as well as provide information to improve future mosquito control operations. Following are the types of records kept.

A. Surveillance Records

1. Weather Data
 - a. daily temperature
 - b. daily rainfall
 - c. barometric pressure
 - d. relative humidity
 - e. wind speed and direction
2. Larval Data
 - a. larval density and identification to species from each open water source inspected/treated
 - b. gravid trap larval identification
 - c. gravid trap egg raft counts
 - d. approximate maximum size of each source
3. Adult Mosquito Data
 - a. daily light trap counts and identification to species
 - b. daily gravid trap counts and identification of *Culex* to genus and others to species
4. Disease Presence Data
 - a. results of mosquito pools by location of up to 50 mosquitoes tested for disease virus
 - b. tallied on per week basis
5. New/Changed sources
 - a. database of new, gone, or changed open water sources
 - b. new or changed off-road catch basins and street catch basins

B. Source Reduction Records

- a. number of fly-dump tires collected
- b. dates ditches and rock filters cleaned

C. Larval Source Treatment Records

1. Daily inspection/treatment records for open water sources
 - a. date
 - b. section and source numbers
 - c. vehicle number and crew assigned
 - d. inspection data per source (condition - positive, negative, or dry; density of larvae/pupae if found; number of tires if found)
 - e. treatment data per source (pesticide used, application method, amount of pesticide)
 - f. total pesticides used and amounts for the day
 - g. post-treatment inspections
 - source condition (positive, negative, or dry); re-treatment pesticide, application method, and amount of pesticide if needed
2. Daily treatment records for street catch basins
 - a. date
 - b. section(s) treated
 - c. vehicle and driver
 - d. total number of basins treated
 - e. pesticide used and total amount used per section
 - f. round number
3. Daily treatment records for off-road catch basins
 - a. date
 - b. section(s) treated
 - c. vehicle and driver
 - d. total number of basins treated
 - e. pesticide used and total amount used per section
 - f. round number

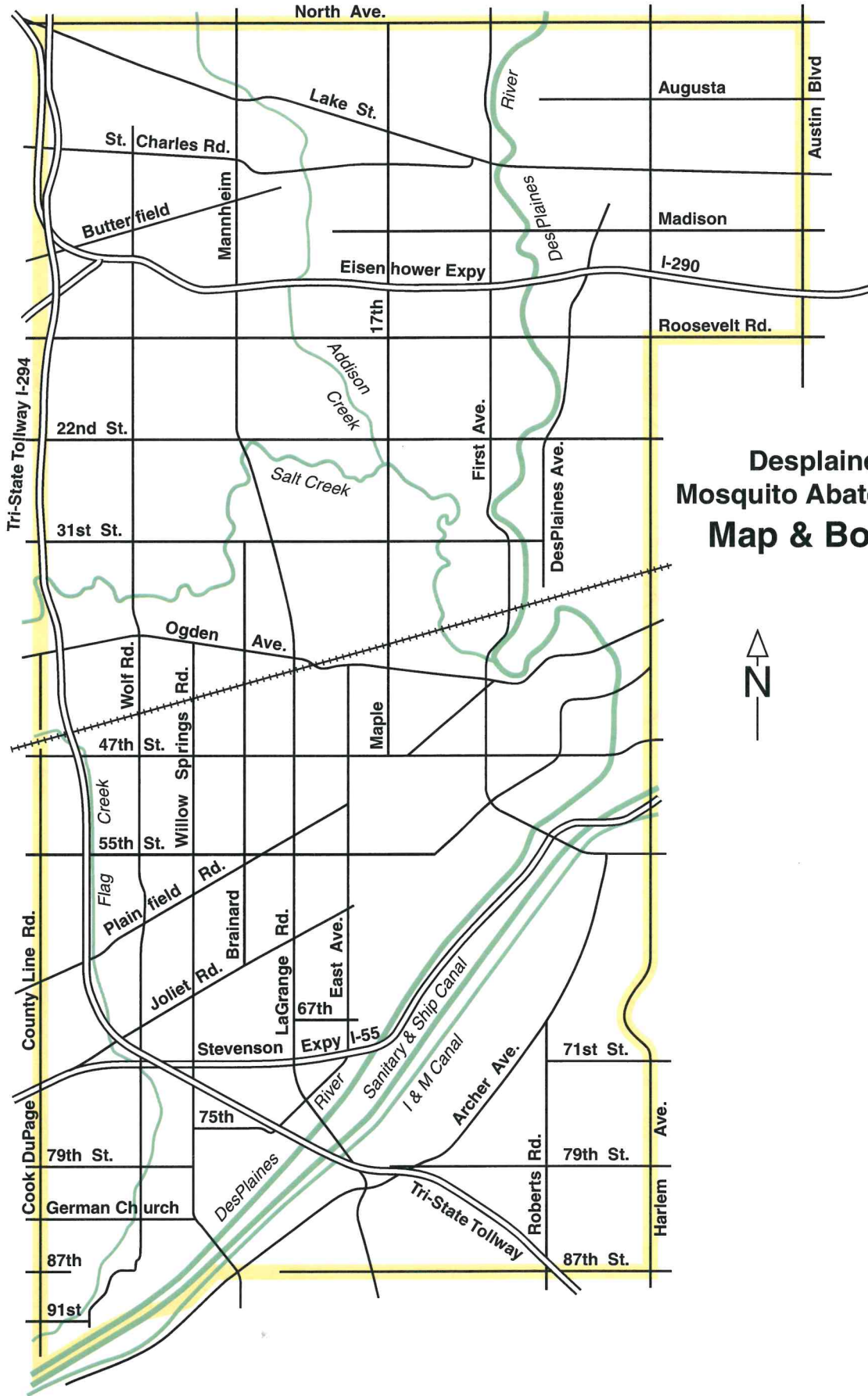
D. Adulticiding Records

- a. date of treatment
- b. vehicle and driver
- c. section(s) treated
- d. linear miles treated
- e. pesticide used, amount used, and application rate

E. Information Distribution Records

- a. number of pamphlets
- b. library or village name
- c. resident calls - complaints, requests, reports of potential new sources
- d. press releases

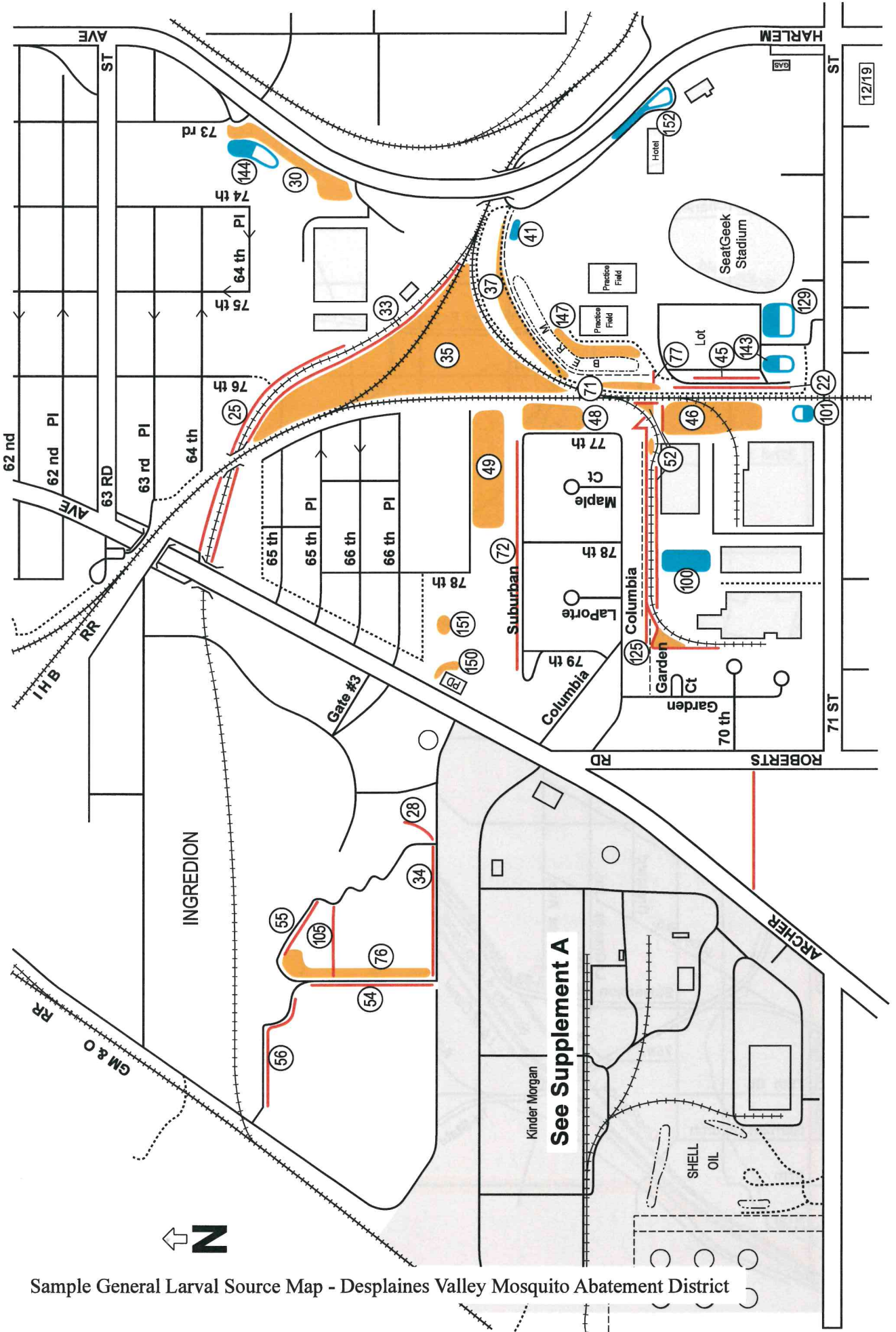
Attachments



Desplaines Valley Mosquito Abatement District Map & Boundaries



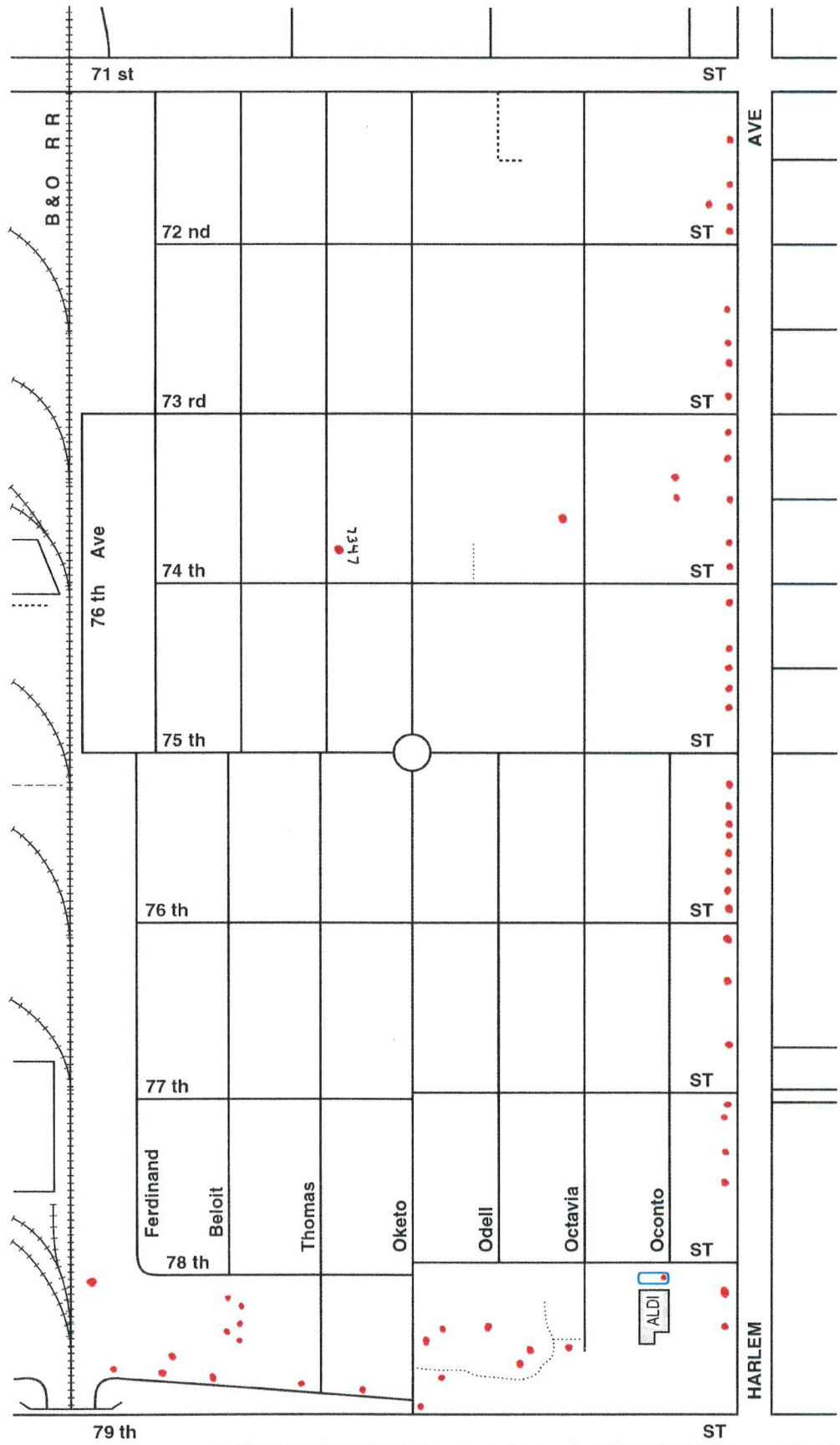
23 - SUMMIT & BEDFORD PARK (SOUTH)



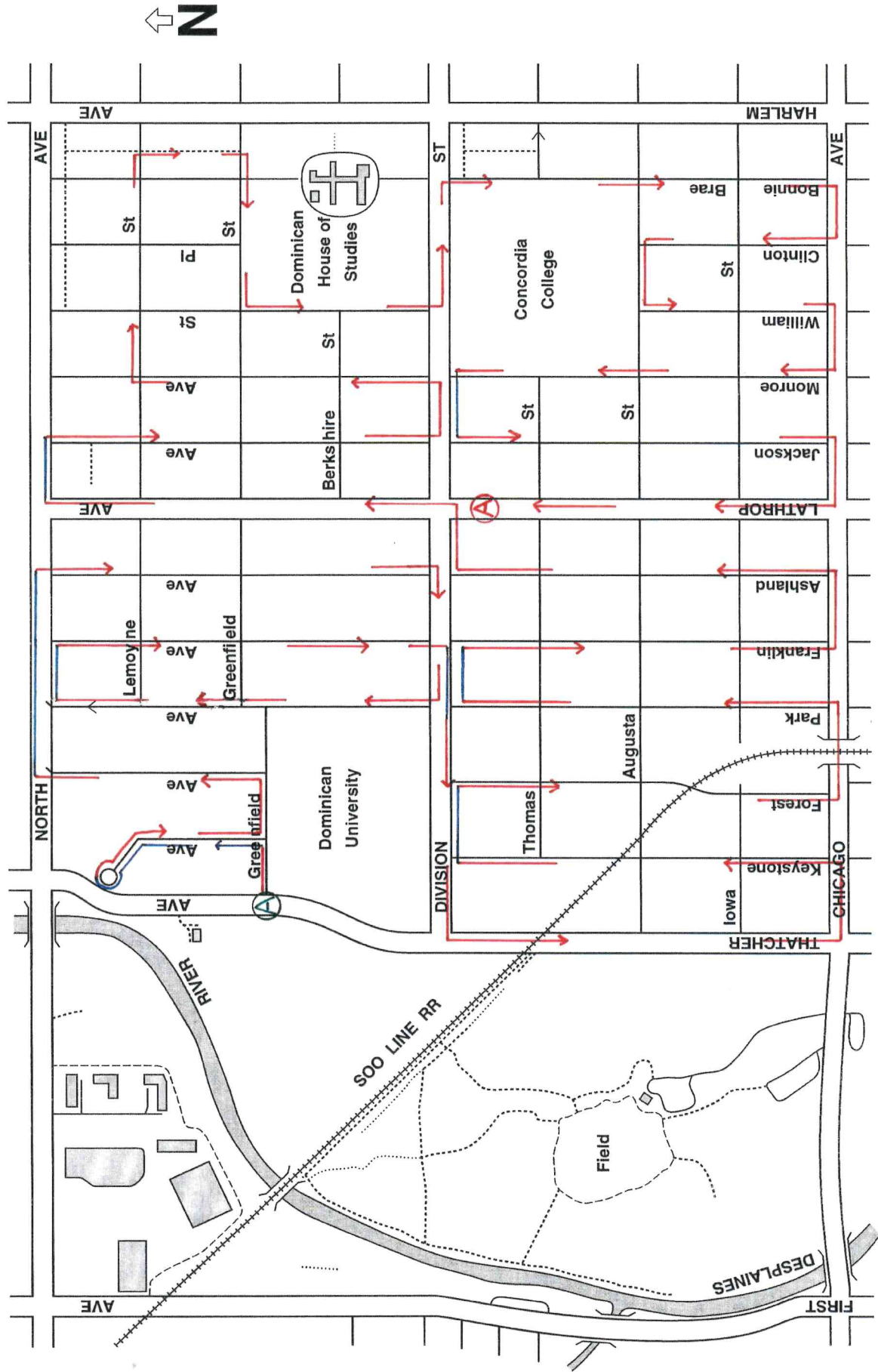
Sample General Larval Source Map - Desplaines Valley Mosquito Abatement District

24 - BRIDGEVIEW (NORTHEAST)

PAGE 1	PAGE 2
PAGE 3	PAGE 4



2 - RIVER FOREST (NORTH)



Sample Adult Control Map - Desplaines Valley Mosquito Abatement District

Desplaines Valley Mosquito Abatement District Criteria for initiating contingency adult mosquito control measures

The District does not conduct routine adult control operations. Adult control is the least effective approach to mosquito control with only localized, temporary benefits. However, adult control is the only *tool* available to use against an adult mosquito population which is involved in a disease transmission cycle. Hence, the District will only implement residential adult control operations as a contingency measure for vector related mosquitoes.

The District considers guidelines established by the Illinois Department of Public Health (IDPH) in their publication entitled AIDPH Surveillance and Response Procedures for Mosquito-borne Arbovirus Emergencies and Center for Disease Control in consideration of residential adult mosquito control operations. Operations will be focused against specific vector populations of *Culex pipiens* and related species in an effort to minimize or break a viral transmission cycle.

The ultra-low volume insecticide aerosol application process as initiated in 1971 is utilized in any adult control operations. All truck mounted equipment utilized by the District is equipped with automatic flow control which directly regulate insecticide application to vehicle speed, thus ensuring accurate application rates. Adult control operations are conducted only when environmental constraints of ambient air temperature between 65-85 degF and average wind speeds in the 2-8 mph range are satisfied to optimize effectiveness.

Specific criteria considered are the following:

Primary Triggers

- a) ***POSITIVE MOSQUITO POOLS*** - Confirmation of viral activity within the adult mosquito population. Our District operates a network of 18 gravid traps to collect adult mosquito samples for subsequent testing of WNV & SLE. These traps are highly selective in collecting *Culex species* mosquitoes having had a blood meal and potential exposure to WNV or SLE. In-house testing using RT-PCR (Real Time-polymerase chain reaction) process gives immediate and accurate results.
- b) ***Surrounding Area Data*** - Viral activity in areas surrounding the district, including data from other Mosquito Abatement Districts, Cook County Department of Public Health, and DuPage County Health Department.
- c) ***Dead Birds*** - Numbers of dead birds and the time of year they are found. Subsequent confirmation by the IDPH of WNV within the dead birds.
- d) ***Time of Season*** - The point in any given mosquito season when *initial* positive bird and mosquito pool samples are confirmed. Positive samples early in the season set the stage for a developed viral amplification/transmission cycle, whereas initial positive samples late in the season would minimize this cycle.
- e) ***Equine Cases*** - Confirmed equine cases are an indicator that a spillover from the bird population has occurred. Viral activity has amplified and escalated to a level where this occurs.
- f) ***Human Cases*** - Confirmed human cases or fatalities are the ultimate indicator that a spillover from the bird population has occurred, and likely to continue.

Secondary Triggers

- a) ***Vector Population Level*** - A larger than normal vector population level poses a greater risk for spillover disease transmission to humans. But a low vector population does not imply that disease transmission will be minimal or disappear. Under the circumstances of a high infection rate, spillover transmission *will* occur even with a low vector population.
- b) ***Weather: Rain & Temperature*** - Rainfall can directly affect vector population levels. Water is required for all mosquito development, with rainfall influencing the number of potential breeding sources. Temperature on the other hand can affect *both* vector population levels and the viral amplification/transmission cycle. Above normal temperatures also can increase the viral transmission rate.

Cook County West Nile Virus Human Cases

