VILLAGE OF DOWNERS GROVE
Report for the Village
4/5/2022

SUBJECT:	SUBMITTED BY:
Award of Three Year Contract – Mosquito Abatement Services	Andy Sikich Public Works Director

SYNOPSIS

A motion is requested to authorize award of a three-year contract for Mosquito Abatement Services to Clarke Environmental Mosquito Management, Inc. of Saint Charles, Illinois in the amount of $170,052.00.

STRATEGIC PLAN ALIGNMENT

The goals for 2021-2023 include *Steward of Financial, Environmental and Neighborhood Sustainability* as well as *Exceptional Municipal Services.*

FISCAL IMPACT

The FY22 Budget includes $41,400.00 in the General Fund for this service. The contract amount for FY22 is $56,684.00. Staff anticipates that the additional funding will be available through savings on other contracts or from fund balance.

RECOMMENDATION

Approval on the April 5, 2022 consent agenda.

BACKGROUND

This contract is for the abatement of mosquitoes in both the larval and adult insect stages throughout the Village. The contract includes pricing for three items:

- One application of a slow release mosquito larvicide (up to 180 day control) into 5320 roadside catch basins, inlets and manholes.
- One booster application in late August of a slow release mosquito larvicide (up to 30 days for late season control) into 400 catch basins, inlets and manholes, if warranted and authorized by the Village.
- Spray application of synthetic pyrethroid mosquito adulticide along up to 167 miles, up to two applications if warranted and authorized by the Village.

A Request for Proposals for Mosquito Abatement Services was issued and published in February 2022, in accordance with the Village's Purchasing Policy. Proposers were asked to provide prices for three years. The proposals received are summarized in the following table. The proposal submitted by Vector Disease Control International, LLC was disqualified due to the substitution of the specified products which were not equal to those listed as a requirement in the RFP.

Service Provider	Proposal 2022	Proposal 2023	Proposal 2024	3-Year Total	
Clarke Environmental Mosquito Management Inc.	$56,684.00	$56,684.00	$56,684.00	$170,052.00	
Vector Disease Control International LLC	$53,997.30	$55,366.40	$56,686.30	$166,050.00	Disqualified

In the Village there are two predominant species of mosquitoes. The floodwater mosquito is the main nuisance mosquito because it is an aggressive biter; however it does not transmit diseases. The second species, the house mosquito, is known to carry West Nile Virus (WNV). Because this mosquito travels less than one mile from where it hatched, spraying is an effective means to control its population. The Illinois Department of Public Health and the DuPage County Health Department both monitor house mosquito numbers and test them for the presence of WNV. Both agencies inform staff if high numbers of house mosquitoes are found or if any trap tests positive for WNV within the Village. They also monitor for other diseases including the Zika virus.

Historically the Village has sprayed for mosquitos once a year if conditions are warranted. Funds are included in the proposed contract for a second spray to provide budget authority if determined to be necessary, generally as a result of weather conditions or the presence of WNV.

The contract requires the contractor to supply a hotline number for residents to inquire about spraying, or ask to be placed on a call list or no spray list, or both. If a spraying is requested by the Village, public notification in the paper and on the Village website will include this hotline number. The contractor then notifies those on the call list at least 24 hours prior to spraying, and turns off their spray equipment at each address that requests such. Historically, this list has had 70 to 100 addresses requesting notification and only a few requesting no spray.

The lowest responsive and responsible proposer is Clarke Environmental Mosquito Management, Inc. of Saint Charles, Illinois. Clarke Environmental Mosquito Management, Inc. has been very active in Northern Illinois for decades and has had several contracts with the Village and adjacent municipalities. Staff is confident that their mosquito abatement work will meet Village specifications for the three year contract.

ATTACHMENTS

Contract Documents
Contractor Evaluation Form FY21

Village of Downers Grove
Public Works

Proposal No. RFP-4-0-2022/DM
for MOSQUITO ABATEMENT SERVICES

Submitted by:
Clarke Environmental Mosquito Management, Inc.,
a Clarke Company

Representatives:
Emily Glasberg

March 8, 2022

675 Sidwell Court
Saint Charles, IL 60174
630 894-2000 P
800-323-5727
630-443-3070 F
www.clarke.com

CLARKE ENVIRONMENTAL MOSQUITO MANAGEMENT, INC.

PROPOSAL FOR

THE VILLAGE OF DOWNERS GROVE

MOSQUITO ABATEMENT SERVICES

RFP-4-0-2022/DM

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675 Sidwell Court
St. Charles, IL 60174
630 894 2000 P
630 443 3070 F
www.clarke.com

March 8, 2022

Ms. Kerstin G. Von Der Heide
Village Forester
Village of Downers Grove
5101 Walnut Avenue
Downers Grove, IL 60515

Dear Ms. Von Der Heide:

Clarke Environmental Mosquito Management, Inc. (Clarke) is pleased to submit our proposal for the 2022 Village of Downers Grove Mosquito Abatement Services contract.

Since 1946, Clarke Mosquito Control has been setting an unparalleled standard of excellence in the mosquito control industry. Clarke utilizes an integrated, high tech approach that provides mosquito control services, products, equipment and education to governmental customers throughout the United States.

The corporation is led by Dr. J. Lyell Clarke, III, a Medical Entomologist. The Clarke Mosquito Control staff of over 135 employees includes specialists in entomology, biology, operations, public relationship, aviation, cartography, regulatory affairs, research and development, and insecticide formulations. The staff has the experience to develop and implement mosquito control solutions customized to the community's needs.

Our corporate office is based in suburban Chicago. Clarke currently serves over 200 governmental customers in Illinois, including municipalities, townships, counties, mosquito abatement districts, and federal agencies (FEMA). We provide services to neighboring communities including the City of Darien and Villages of Westmont, Lisle, Hinsdale, Lombard, Burr Ridge and Woodridge. Clarke is able to provide individualized services to each program while maintaining a regional approach. For example, community spray efforts among neighboring communities can be coordinated to enhance coverage when high nuisance or disease are present.

Clarke has a fleet of 100 trucks, a local helicopter, and a partnership with Dynamic Aviation for fixed-wing aerial application. Contracts range in scope from surveillance consulting, complete integrated programs for nuisance control and disease prevention, to emergency response contract for disease outbreaks or hurricanes. Clarke is flexible to design a program that fits a community's needs and budget.

We appreciate your consideration and look forward to providing the Village of Downers Grove with an unsurpassed level of quality services for years to come. If any questions arise, please do not hesitate to contact me directly at 847-421-9117.

Sincerely,

Emily Glasberg
Key Accounts Manager / Entomologist

TAB 1

Village of Downers Grove

REQUEST FOR PROPOSAL

Name of Proposing Company: Clarke Environmental Mosquito Management

Project Name: **MOSQUITO ABATEMENT SERVICES**
Proposal No.: RFP-4-0-2022/DM
Proposal Due: March 8, 2022 @ 10:00 a.m. at Public Works
Pre-Proposal Conference: **Informational** on March 1, 2022 @ 10:00 a.m. at Public Works Building, 5101 Walnut Avenue, Downers Grove, IL 60515

Required of All Proposers:
Deposit: No
Letter of Capability of Acquiring Performance Bond: No

Required of Awarded Contractor:
Performance Bond/Letter of Credit: No
Certificate of Insurance: Yes

Legal Advertisement Published: February 18, 2022
Date Issued: February 18, 2022
This document consists of 36 pages.

RETURN ORIGINAL PROPOSAL (NO STAPLES) IN SEALED ENVELOPE MARKED WITH THE PROPOSAL NUMBER AS NOTED ABOVE TO:

KERSTIN G. VON DER HEIDE
VILLAGE FORESTER
VILLAGE OF DOWNERS GROVE PUBLIC WORKS
5101 WALNUT AVENUE
DOWNERS GROVE, IL 60515
PHONE: 630/434-5475
FAX: 630/434-5495
kvonderheide@downers.us
www.downers.us

The VILLAGE OF DOWNERS GROVE will receive proposals Monday thru Friday, 8:00 A.M. to 5:00 P.M. at the Public Works Building, 5101 Walnut Avenue, Downers Grove, IL 60515.

SPECIFICATIONS MUST BE MET AT THE TIME THE PROPOSAL IS DUE.

The Village Council reserves the right to accept or reject any and all Proposals, to waive technicalities and to accept or reject any item of any Proposal.

The documents constituting component parts of this contract are the following:

I. REQUEST FOR PROPOSALS

II. TERMS & CONDITIONS

III. DETAILED SPECIFICATIONS

IV. PROPOSER'S RESPONSE TO RFP

V. PROPOSAL/CONTRACT FORM

DO NOT DETACH ANY PORTION OF THIS DOCUMENT. INVALIDATION COULD RESULT. Proposers MUST submit one original of the total Proposal. Upon formal award of the Proposal, the successful Proposer will receive a copy of the executed contract.

PLEASE DO NOT BIND ANY PORTION OF THE PROPOSAL WITH STAPLES.

I. REQUEST FOR PROPOSALS

1. GENERAL

1.1 Notice is hereby given that the Village of Downers Grove will receive sealed Proposals up to THE TIME AND DATE SET FORTH ON THE COVER PAGE OF THIS REQUEST FOR PROPOSALS.

1.2 Proposals must be received at the Village of Downers Grove by the time and date specified. Proposals received after the specified time and date will not be accepted and will be returned unopened to the Proposer.

1.3 Proposal forms shall be sent to the Village of Downers Grove, ATTN: Kerstin G. von der Heide, in a sealed envelope marked "SEALED PROPOSAL". The envelope shall be marked with the name of the project, date, and time set for receipt of Proposals.

1.4 All Proposals must be submitted on the forms supplied by the Village and signed by a proper official of the company submitting the Proposal. Telephone, email and fax proposals will not be accepted.

1.5 By submitting this Proposal, the Proposer certifies under penalty of perjury that they have not acted in collusion with any other Proposer or potential Proposer.

2. PREPARATION OF PROPOSAL

2.1 It is the responsibility of the Proposer to carefully examine the specifications and proposal documents and to be familiar with all of the requirements, stipulations, provisions, and conditions surrounding the proposed services.

2.2 No oral or telephone interpretations of specifications shall be binding upon the Village. All requests for interpretations or clarifications shall be made in writing and received by the Village at least five (5) business days prior to the date set for receipt of Proposals. All changes or interpretations of the specifications shall be made by the Village in a written addendum to the Village's proposers of record.

2.3 In case of error in the extension of prices in the Proposal, the hourly rate or unit price will govern. In case of discrepancy in the price between the written and numerical amounts, the written amount will govern.

2.4 All costs incurred in the preparation, submission, and/or presentation of any Proposal including any Proposer's travel or personal expenses shall be the sole responsibility of the Proposer and will not be reimbursed by the Village.

2.5 The Proposer hereby affirms and states that the prices quoted herein constitute the total cost to the Village for all work involved in the respective items and that this cost also includes all insurance, bonds, royalties, transportation charges, use of all tools and equipment, superintendence, overhead expense, all profits and all other work, services and conditions necessarily involved in the work to be done and materials to be furnished in accordance with

the requirements of the Contract Documents considered severally and collectively.

3. PRE- PROPOSAL CONFERENCE

3.1 A pre-proposal conference may be offered to provide additional information, inspection or review of current facilities or equipment, and to provide an open forum for questions from Proposers. This pre-proposal conference is not mandatory (unless stated "Required" on the cover of this document), but attendance by Proposers is strongly advised as this will be the last opportunity to ask questions concerning the Proposal.

3.2 Questions may be posed in writing to the Village (faxed and emailed questions are acceptable), but must be received by the Village prior to the scheduled time for the pre-proposal conference. Questions received will be considered at the conference. An addendum may be issued as a result of the pre-proposal conference. Such an addendum is subject to the provisions for issuance of an addendum as set forth in Section 2.2 above.

4. MODIFICATION OR WITHDRAWAL OF PROPOSALS

4.1 A Proposal that is in the possession of the Village may be altered by a letter bearing the signature or name of the person authorized for submitting a Proposal, provided that it is received prior to the time and date set for the Proposal opening. Telephone, email or verbal alterations of a Proposal will not be accepted.

4.2 A Proposal that is in the possession of the Village may be withdrawn by the Proposer, up to the time set for the Proposal opening, by a letter bearing the signature or name of the person authorized for submitting Proposals. Proposals may not be withdrawn after the Proposal opening and shall remain valid for a period of ninety (90) days from the date set for the Proposal opening, unless otherwise specified.

5. SECURITY FOR PERFORMANCE

5.1 The awarded contractor, within thirteen (13) calendar days after acceptance of the Proposer's Proposal by the Village, shall furnish security for performance acceptable to the Village when required under the documents. Such security shall be either a satisfactory performance bond (bonding company must be licensed to do business in Illinois) or a letter of credit on the form provided by the Village and available from the Village's Purchasing Manager. Any bond shall include a provision as will guarantee faithful performance of the Illinois Prevailing Wage Act, 820 ILCS 130/1 et seq. **NOTE: As evidence of capability to provide such security for performance, each Proposer shall submit with the Proposal either a letter executed by its surety company indicating the Proposer's performance bonding capability, or a letter from a bank or savings and loan within twenty-five miles of the corporate boundaries of the Village indicating its willingness and intent to provide a letter of credit for the Proposer.**

6. DELIVERY

6.1 All proposal prices are to be quoted, delivered F.O.B. Village of Downers Grove, 5101 Walnut Avenue, Downers Grove, IL 60515.

7. TAX EXEMPTION

7.1 The Village is exempt from Illinois sales or use tax for direct purchases of materials and supplies. A copy of the Illinois Sales Tax Exemption Form will be issued upon request. The Village's federal identification will also be provided to selected vendor.

8. RESERVED RIGHTS

8.1 The Village reserves the exclusive right to waive sections, technicalities, irregularities and informalities and to accept or reject any and all Proposals and to disapprove of any and all subcontractors as may be in the best interest of the Village. Time and date requirements for receipt of Proposals will not be waived.

II. TERMS AND CONDITIONS

9. VILLAGE ORDINANCES

9.1 The successful Proposer will strictly comply with all ordinances of the Village of Downers Grove and laws of the State of Illinois.

10 USE OF VILLAGE'S NAME

10.1 The Proposer is specifically denied the right of using in any form or medium the name of the Village for public advertising unless express permission is granted by the Village.

11. SPECIAL HANDLING

11.1 Prior to delivery of any product which is caustic, corrosive, flammable or dangerous to handle, the Proposer will provide written directions as to methods of handling such products, as well as the antidote or neutralizing material required for its first aid before delivery. Proposer shall also notify the Village and provide material safety data sheets for all substances used in connection with this Contract which are defined as toxic under the Illinois Toxic Substances Disclosure to Employees Act.

12. INDEMNITY AND HOLD HARMLESS AGREEMENT

12.1 To the fullest extent permitted by law, the Proposer shall indemnify, keep and save harmless the Village and its agents, officers, and employees, against all injuries, deaths, losses, damages, claims, suits, liabilities, judgments, costs and expenses, which may arise directly or indirectly from any negligence or from the reckless or willful misconduct of the Proposer, its employees, or its subcontractors, and the Proposer shall at its own expense, appear, defend and pay all charges of attorneys and all costs and other expenses arising therefrom or incurred in connection therewith, and, if any judgment shall be rendered against the Village in any such action, the Proposer shall, at its own expense, satisfy and discharge the same. This agreement shall not be construed as requiring the Proposer to indemnify the Village for its own negligence. The Proposer shall indemnify, keep and save harmless the Village only where a loss was caused by the negligent, willful or reckless acts or omissions of the Proposer, its employees, or its subcontractors.

13. NONDISCRIMINATION

13.1 Proposer shall, as a party to a public contract:

(a) Refrain from unlawful discrimination in employment and undertake affirmative action to assure equality of employment opportunity and eliminate the effects of past discrimination;

(b) By submission of this Proposal, the Proposer certifies that it is an "equal opportunity employer" as defined by Section 2000(e) of Chapter 21, Title 42, U.S. Code Annotated and Executive Orders #11246 and #11375, which are incorporated herein by reference. The Equal Opportunity clause, Section 6.1 of the Rules and Regulations of the Department of Human Rights of the State of Illinois, is a material part of any contract awarded on the basis of this Proposal.

13.2 It is unlawful to discriminate on the basis of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental disability unrelated to ability, military status, order of protection status, sexual orientation, sexual identity, or an unfavorable discharge from military service. Proposer shall comply with standards set forth in Title VII of the Civil Rights Act of 1964, 42 U.S.C. Sec. 2000 et seq., The Human Rights Act of the State of Illinois, 775 ILCS 5/1-101et. seq., and The Americans With Disabilities Act, 42 U.S.C. Sec. 12101 et. seq.

14. SEXUAL HARASSMENT POLICY

14.1 The Proposer, as a party to a public contract, shall have a written sexual harassment policy that:

14.1.1 Notes the illegality of sexual harassment;
14.1.2 Sets forth the State law definition of sexual harassment;
14.1.3 Describes sexual harassment utilizing examples;
14.1.4 Describes the Proposer's internal complaint process including penalties;
14.1.5 Describes the legal recourse, investigative and complaint process available through the Illinois Department of Human Rights and the Human Rights Commission and how to contact these entities; and
14.1.6 Describes the protection against retaliation afforded under the Illinois Human Rights Act.

15. EQUAL EMPLOYMENT OPPORTUNITY

15.1 In the event of the Proposer's non-compliance with the provisions of this Equal Employment Opportunity Clause, the Illinois Human Rights Act or the Rules and Regulations of the Illinois Department of Human Rights ("Department"), the Proposer may be declared ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the contract may be canceled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation. During the performance of this Contract, the Proposer agrees as follows:

15.1.1 That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental disability unrelated to ability, military status, order of protection status, sexual orientation, sexual identity or an unfavorable discharge from military service; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization.

15.1.2 That, if it hires additional employees in order to perform this Contract or any portion thereof, it will determine the availability (in accordance with the Department's Rules and Regulations) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.

15.1.3 That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, marital status, national origin or ancestry, age, physical or mental disability unrelated to ability, military status, order of protection status, sexual orientation, or an unfavorable discharge from military services.

15.1.4 That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the Proposer's obligations under the Illinois Human Rights Act and the Department's Rules and Regulations. If any such labor organization or representative fails or refuses to cooperate with the Proposer in its efforts to comply with such Act and Rules and Regulations, the Proposer will promptly so notify the Department and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.

15.1.5 That it will submit reports as required by the Department's Rules and Regulations, furnish all relevant information as may from time to time be requested by the Department or the contracting agency, and in all respects comply with the Illinois Human Rights Act and the Department's Rules and Regulations.

15.1.6 That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Department for purpose of investigation to ascertain compliance with the Illinois Human Rights Act and the Department's Rules and Regulations.

15.1.7 That it will include verbatim or by reference the provisions of this clause in every subcontract it awards under which any portion of the contract obligations are undertaken or assumed, so that such provisions will be binding upon such

subcontractor. In the same manner as with other provisions of this Contract, the Proposer will be liable for compliance with applicable provisions of this clause by such subcontractors; and further it will promptly notify the contracting agency and the Department in the event any subcontractor fails or refuses to comply therewith. In addition, the Proposer will not utilize any subcontractor declared by the Illinois Human Rights Commission to be ineligible for contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations.

16. DRUG FREE WORK PLACE

Proposer, as a party to a public contract, certifies and agrees that it will provide a drug free workplace by:

16.1 Publishing a statement: (1) Notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance, including cannabis, is prohibited in the Village's or Proposer's workplace. (2) Specifying the actions that will be taken against employees for violations of such prohibition. (3) Notifying the employee that, as a condition of employment on such contract or grant, the employee will: (A) abide by the terms of the statement; and (B) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

16.2 Establishing a drug free awareness program to inform employees about: (1) the dangers of drug abuse in the workplace; (2) the Village's or Proposer's policy of maintaining a drug free workplace; (3) any available drug counseling, rehabilitation and employee assistance programs; (4) the penalties that may be imposed upon employees for drug violations.

16.3 Providing a copy of the statement required above to each employee engaged in the performance of the contract or grant and to post the statement in a prominent place in the workplace.

16.4 Notifying the contracting or granting agency within ten (10) days after receiving notice of any criminal drug statute conviction for a violation occurring in the workplace from an employee or otherwise receiving actual notice of such conviction.

16.5 Imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by, any employee who is so convicted as required by section 5 of the Drug Free Workplace Act.

16.6 Assisting employees in selecting a course of action in the event drug counseling, treatment and rehabilitation is required and indicating that a trained referral team is in place.

16.7 Making a good faith effort to continue to maintain a drug free workplace through implementation of the Drug Free Workplace Act.

17. PATRIOT ACT COMPLIANCE

17.1 The Proposer represents and warrants to the Village that neither it nor any of its principals,

shareholders, members, partners, or affiliates, as applicable, is a person or entity named as a Specially Designated National and Blocked Person (as defined in Presidential Executive Order 13224) and that it is not acting, directly or indirectly, for or on behalf of a Specially Designated National and Blocked Person. The Proposer further represents and warrants to the Village that the Proposer and its principals, shareholders, members, partners, or affiliates, as applicable are not, directly or indirectly, engaged in, and are not facilitating, the transactions contemplated by this Contract on behalf of any person or entity named as a Specially Designated National and Blocked Person. The Proposer hereby agrees to defend, indemnify and hold harmless the Village, and its elected or appointed officers, employees, agents, representatives, engineers and attorneys, from and against any and all claims, damages, losses, risks, liabilities and expenses(including reasonable attorney's fees and costs) arising from or related to any breach of the foregoing representations and warranties.

18. INSURANCE REQUIREMENTS

18.1 Prior to starting the work, Contractor and any Subcontractors shall procure, maintain and pay for such insurance as will protect against claims for bodily injury or death, or for damage to property, including loss of use, which may arise out of operations by the Contractor or Subcontractor or any Sub-Sub Contractor or by anyone employed by any of them, or by anyone for whose acts any of them may be liable. Such insurance shall not be less than the greater of coverages and limits of liability specified below or any coverages and limits of liability specified in the Contract Documents or coverages and limits required by law unless otherwise agreed to by the Village.

Workers Compensation	$500,000	Statutory
Employers Liability	$1,000,000 $1,000,000 $1,000,000	Each Accident Disease Policy Limit Disease Each Employee
Comprehensive General Liability	$2,000,000 $2,000,000	Each Occurrence Aggregate ***(Applicable on a Per Project Basis)***
Commercial Automobile Liability	$1,000,000	Each Accident
Professional Errors & Omissions (pursuant to section 18.9 below)	$2,000,000 $2,000,000	Each Claim Annual Aggregate
Pollution Liability	$5,000,000	
Umbrella Liability	$ 5,000,000	

18.2 Commercial General Liability Insurance required under this paragraph shall be written on an occurrence form and shall include coverage for Products/Completed Operations, Personal Injury with Employment Exclusion (if any) deleted, Blanket XCU and Blanket Contractual Liability insurance applicable to defense and indemnity obligations and other contractual indemnity assumed under the Contract Documents. The limit must be on a "Per Project Basis".

18.3 Comprehensive Automobile Liability Insurance required under this paragraph shall include coverage for all owned, hired and non-owned automobiles.

18.4 Workers Compensation coverage shall include a waiver of subrogation against the Village.

18.5 Comprehensive General Liability, Employers Liability and Commercial Automobile Liability Insurance may be arranged under single policies for full minimum limits required, **or** by a combination of underlying policies with the balance provided by Umbrella and/or Excess Liability policies.

18.6 Contractor and all Subcontractors shall have their respective Comprehensive General Liability (including products/completed operations coverage), Employers Liability, Commercial Automobile Liability, and Umbrella/Excess Liability policies endorsed to add the "Village of Downers Grove, its officers, officials, employees and volunteers" as "additional insureds" with respect to liability arising out of operations performed; claims for bodily injury or death brought against the Village by any Contractor or Subcontractor employees, or the employees of Subcontractor's subcontractors of any tier, however caused, related to the performance of operations under the Contract Documents. Such insurance afforded to the Village shall be endorsed to provide that the insurance provided under each policy shall be ***Primary and Non-Contributory***.

18.7 Contractor and all Subcontractors shall maintain in effect all insurance coverages required by the Contract Documents at their sole expense and with insurance carriers licensed to do business in the State of Illinois and having a current A. M. Best rating of no less than A- VIII. In the event that the Contractor or any Subcontractor fails to procure or maintain any insurance required by the Contract Documents, the Village may, at its option, purchase such coverage and deduct the cost thereof from any monies due to the Contractor or Subcontractor, or withhold funds in an amount sufficient to protect the Village, or terminate this Contract pursuant to its terms.

18.8 All insurance policies shall contain a provision that coverages and limits afforded hereunder shall not be canceled, materially changed, non-renewed or restrictive modifications added, without thirty (30) days prior written notice to the Village. Renewal certificates shall be provided to the Village not less than five (5) days prior to the expiration date of any of the required policies. All Certificates of Insurance shall be in a form acceptable to Village and shall provide satisfactory evidence of compliance with all insurance requirements. The Village shall not be obligated to review such certificates or other evidence of insurance, or to

advise Contractor or Subcontractor of any deficiencies in such documents, and receipt thereof shall not relieve the Contractor or Subcontractor from, nor be deemed a waiver of the right to enforce the terms of the obligations hereunder. The Village shall have the right to examine any policy required and evidenced on the Certificate of Insurance.

18.9 Only in the event that the Work under the Contract Documents includes design, consultation, or any other professional services, Contractor or the Subcontractor shall procure, maintain, and pay for Professional Errors and Omissions insurance with limits of not less than $2,000,000 per claim and $2,000,000 annual aggregate. If such insurance is written on a claim made basis, the retrospective date shall be prior to the start of the Work under the Contract Documents. Contractor and all Subcontractors agree to maintain such coverage for three (3) years after final acceptance of the Project by the Village or such longer period as the Contract Documents may require. Renewal policies during this period shall maintain the same retroactive date.

18.10 Any deductibles or self-insured retentions shall be the sole responsibility of the Insured. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Village, its officers, officials, employees and volunteers; or the Proposer shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

18.11 Pollution liability required under this paragraph must be for a Pesticide/Herbicide Applicator Insurance covering agricultural and aquatic application.

19. COPYRIGHT/PATENT INFRINGEMENT

19.1 The Proposer agrees to indemnify, defend, and hold harmless the Village against any suit, claim, or proceeding brought against the Village for alleged use of any equipment, systems, or services provided by the Proposer that constitutes a misuse of any proprietary or trade secret information or an infringement of any patent or copyright.

20. COMPLIANCE WITH OSHA STANDARDS

20.1 Equipment supplied to the Village must comply with all requirements and standards as specified by the Occupational Safety and Health Act. All guards and protectors as well as appropriate markings will be in place before delivery. Items not meeting any OSHA specifications will be refused.

21. CERCLA INDEMNIFICATION

21.1 In the event this is a contract that has environment aspects, the Proposer shall, to the maximum extent permitted by law, indemnify, defend, and hold harmless the Village, its officers, employees, agents, and attorneys from and against any and all liability, including without limitation, costs of response, removal, remediation, investigation, property damage, personal injury, damage to natural resources, health assessments, health settlements, attorneys' fees, and other related transaction costs arising under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, 42 U.S.C.A. Sec. 9601, et seq., as amended, and all other applicable statutes, regulations, ordinances, and

under common law for any release or threatened release of the waste material collected by the Proposer, both before and after its disposal.

22. CAMPAIGN DISCLOSURE

22.1 Any contractor, proposer, bidder or vendor who responds by submitting a bid or proposal to the Village of Downers Grove shall be required to submit with its submission, an executed Campaign Disclosure Certificate, attached hereto.

22.2 The Campaign Disclosure Certificate is required pursuant to the Village of Downers Grove Council Policy on Ethical Standards and is applicable to those campaign contributions made to any member of the Village Council.

22.3 Said Campaign Disclosure Certificate requires any individual or entity bidding to disclose campaign contributions, as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4), made to current members of the Village Council within the five (5) year period preceding the date of the bid or proposal release.

22.4 By signing the bid or proposal documents, contractor/proposer/bidder/vendor agrees to refrain from making any campaign contributions as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4) to any Village Council member and any challengers seeking to serve as a member of the Downers Grove Village Council.

23. SUBLETTING OF CONTRACT

23.1 No contract awarded by the Village shall be assigned or any part subcontracted without the written consent of the Village Manager. In no case shall such consent relieve the Contractor from their obligation or change the terms of the contract.

All approved subcontracts shall contain language which incorporates the terms and conditions of this Contract.

24. TERM OF CONTRACT

24.1 This Contract may be extended no more than twice for subsequent annual periods (two annual extensions) by mutual agreement of both parties, providing such agreement complies with Village purchasing policies and the availability of funds. However, if this Contract is not one that is subject to extension, such information will be available in the detailed specifications or special conditions section.

25. TERMINATION OF CONTRACT

25.1 The Village reserves the right to terminate the whole or any part of this Contract, upon written notice to the Contractor, for any reason and/or in the event that sufficient funds to complete the Contract are not appropriated by the Village.

25.2 The Village further reserves the right to terminate the whole or any part of this Contract, upon written notice to the Contractor, in the event of default by the Contractor. Default is defined as failure of the Contractor to perform any of the provisions of this Contract or

failure to make sufficient progress so as to endanger performance of this Contract in accordance with its terms. In the event that the Contractor fails to cure the default upon notice, and the Village declares default and termination, the Village may procure, upon such terms and in such manner as the Village may deem appropriate, supplies or services similar to those so terminated. The Contractor shall be liable for any excess costs for such similar supplies or services unless acceptable evidence is submitted to the Village that failure to perform the Contract was due to causes beyond the control and without the fault or negligence of the Contractor. Any such excess costs incurred by the Village may be set-off against any monies due and owing by the Village to the Contractor.

26. BILLING & PAYMENT PROCEDURES

26.1 Payment will be made upon receipt of an invoice referencing Village purchase order number. Once an invoice and receipt of materials or service have been verified, the invoice will be processed for payment in accordance with the Village payment schedule. The Village will comply with the Local Government Prompt Payment Act, 50 ILCS 505/1 et seq., in that any bill approved for payment must be paid or the payment issued to the Proposer within 60 days of receipt of a proper bill or invoice. If payment is not issued to the Proposer within this 60 day period, an interest penalty of 1.0% of any amount approved and unpaid shall be added for each month or fraction thereof after the end of this 60 day period, until final payment is made.

26.2 The Village shall review in a timely manner each bill or invoice after its receipt. If the Village determines that the bill or invoice contains a defect making it unable to process the payment request, the Village shall notify the Contractor requesting payment as soon as possible after discovering the defect pursuant to rules promulgated under 50 ILCS 505/1 et seq. The notice shall identify the defect and any additional information necessary to correct the defect.

26.3 If this Contract is for work defined as a "fixed public work" project under the Illinois Prevailing Wage Act, 820 ILCS 130/2, any contractor or subcontractor is required to submit certified payroll records along with the invoice. No invoice shall be paid without said records.

26.4 Please send all invoices to the attention of: Kerstin G. von der Heide, Village of Downers Grove, 5101 Walnut Avenue, Downers Grove, IL 60515.

27. RELATIONSHIP BETWEEN THE PROPOSER AND THE VILLAGE

27.1 The relationship between the Village and the Proposer is that of a buyer and seller of professional services and it is understood that the parties have not entered into any joint venture or partnership with the other.

28. STANDARD OF CARE

28.1. Services performed by Proposer under this Contract will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. No other representations express or

implied, and no warranty or guarantee is included or intended in this Contract, or in any report, opinions, and documents or otherwise.

28.2 If the Proposer fails to meet the foregoing standard, Proposer will perform at its own cost, and without reimbursement from the Village, the professional services necessary to correct errors and omissions caused by Proposer's failure to comply with the above standard and reported to Proposer within one (1) year from the completion of Proposer's services for the Project.

28.3 For Professional Service Agreements (i.e. Engineer, Consultant): Project site visits by Proposer during construction or equipment installation or the furnishing of Project representatives shall not make Proposer responsible for: (i) constructions means, methods, techniques, sequences or procedures; (ii) for construction safety precautions or programs; or (iii) for any construction contactor(s') failure to perform its work in accordance with contract documents.

29. GOVERNING LAW

29.1 This Contract will be governed by and construed in accordance with the laws of the State of Illinois without regard for the conflict of laws provisions. Venue is proper only in the County of DuPage and the Northern District of Illinois.

30. SUCCESSORS AND ASSIGNS

30.1 The terms of this Contract will be binding upon and inure to the benefit of the parties and their respective successors and assigns; provided, however, that neither party will assign this Contract in whole or in part without the prior written approval of the other. The Proposer will provide a list of key staff, titles, responsibilities, and contact information to include all expected subcontractors.

31. WAIVER OF CONTRACT BREACH

31.1 The waiver by one party of any breach of this Contract or the failure of one party to enforce at any time, or for any period of time, any of the provisions hereof will be limited to the particular instance and will not operate or be deemed to waive any future breaches of this Contract and will not be construed to be a waiver of any provision except for the particular instance.

32. AMENDMENT

32.1 This Contract will not be subject to amendment unless made in writing and signed by all parties.

33. NOT TO EXCEED CONTRACT

33.1 The contract price is a "not-to-exceed" cost. At any time additional work is necessary or requested, and the not-to-exceed price is increased thereby, any change, addition or price increase must be agreed to in writing by all parties who have executed the initial contract.

34. SEVERABILITY OF INVALID PROVISIONS

34.1 If any provisions of this Contract are held to contravene or be invalid under the laws of any state, country or jurisdiction, contravention will not invalidate the entire Contract, but it will be construed as if not containing the invalid provision and the rights or obligations of the parties will be construed and enforced accordingly.

35. NOTICE

35.1 Any notice will be in writing and will be deemed to be effectively served when deposited in the mail with sufficient first class postage affixed, and addressed to the party at the party's place of business. Notices shall be addressed to the Village as follows:

Village Manager
Village of Downers Grove
801 Burlington Ave.
Downers Grove, IL 60515

And to the Proposer as designated in the Contract Form.

36. COOPERATION WITH FOIA COMPLIANCE

36.1 Contractor acknowledges that the Freedom of Information Act may apply to public records in possession of the Contractor or a subcontractor. Contractor and all of its subcontractors shall cooperate with the Village in its efforts to comply with the Freedom of Information Act. 5 ILCS 140/1 et seq.

III. DETAIL SPECIFICATIONS

A. Competitive Sealed Proposal

The Village of Downers Grove, an Illinois municipal corporation (hereinafter referred to as the "Village"), will receive sealed proposals from Contractors for mosquito abatement services identified in the solicitation. Proposals must be received by the date and time specified.

B. Informational Pre-proposal Conference

For the purpose of familiarizing proposers with the project, answering questions, and issuing addenda as needed for clarification of the proposal documents, an informational pre-proposal conference shall be held at the Downers Grove Public Works, 5101 Walnut Avenue, Downers Grove, Illinois 60515, (630) 434-5460. Attendance is not required. Date and time of the meeting are listed on the cover sheet.

C. Objective

This contract is for mosquito abatement services within the incorporated limits of Downers Grove. The specifications contained herein detail how abatement activities shall occur.

D. Qualifications of Contractors

The Contractor shall be required before the award of any contract to show to the complete satisfaction of the Village Forester that it has the necessary facilities, ability, and resources to provide the services specified herein in a satisfactory manner. The Contractor shall be required to give past history and references in order to satisfy the Village Forester in regard to the Contractor's qualifications. The Village Forester shall make reasonable investigations deemed necessary and proper to determine the ability of the Contractor to perform the work. The Village Forester reserves the right to reject any proposal if the evidence submitted by, or investigation of, the Contractor fails to satisfy the Village Forester that the Contractor is properly qualified to carry out the obligations of the contract and to complete the work described herein. In addition to those requirements set forth in Terms and Conditions above, evaluation of the Contractor's qualifications shall include:

1. The ability, capacity, skill, and resources to perform the work or provide the service required
2. The ability of the Contractor to perform the work or provide the service promptly or within the time specified, without delay or interference
3. The character, integrity, reputation, judgement, experience, and efficiency of the Contractor
4. The quality of performance of previous mosquito abatement contracts or services. The Contractor shall have been actively engaged in the mosquito pest management industry for the most recent consecutive five (5) years (2017, 2018, 2019, 2020, and 2021). The Contractor shall list at least five (5) municipal or other governmental references who can attest to the Contractor's previous satisfactory performance with similar contracts for mosquito abatement, including the contact name, phone number, year(s) of service, and whether the contract included both larviciding and adulticiding activities
5. The previous or existing compliance by the Contractor with laws and ordinances relating to the contract or service

6. The sufficiency of the financial resources and the ability of the Contractor to perform the contract or provide the service
7. The quality, availability and adaptability of the supplies, or contractual services to the particular use required
8. The Contractor shall be required to maintain a fully staffed office within approximately 100 mile radius of the Village for the duration of this contract
9. The number and scope of conditions attached to the proposal.

E. Proposer Investigations

Before submitting a proposal, each Contractor shall make all investigations and examinations necessary to ascertain all site conditions and requirements affecting the full performance of the contract and to verify any representations made by the Village Forester upon which the Contractor will rely. If the Contractor receives an award as a result of its proposal submission, failure to have made such investigations and examinations will in no way relieve the Contractor from its obligations to comply in every detail with all provisions and requirements of the contract documents, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim whatsoever by the Contractor for additional compensation.

F. Quantities

Whenever a proposal is sought for services, the quantities shall be construed as estimates for the purpose of obtaining unit prices unless otherwise stated. The Village reserves the right to increase or decrease the stated quantities.

G. Proposal Review and Award of Contract

The Village shall review and evaluate all proposals submitted in response to this RFP. This includes reviewing each proposal for compliance with the minimum proposal requirements of the RFP. Failure to comply with any mandatory requirements may disqualify a proposal.

Proposals will then be evaluated and rated in accordance with the evaluation criteria. These evaluation criteria include:

- Conformance to Requirements. Degree to which proposal meets technical needs of the Village. Exceptions will detract from overall rating.
- Clarity of Proposal. Degree to which proposal clearly and concisely follows the Request for Proposal. Answers must include and correspond to questions.
- Service. How the Contractor proposes to deliver service.
- References. Discussions with the Proposer's existing and any former clients.
- Costs. The total cost of abatement services for each year and the sum total cost for all 3 years.

The Village reserves the right to conduct pre-award discussions and/or pre-contract negotiations with any or all responsive and responsible Contractors who submit proposals determined to be reasonably acceptable of being selected for award. Contractors shall be accorded fair and equal treatment with respect to any opportunity for discussion and revision of proposals and such revisions may be permitted after submission of proposals and prior to award of a contract.

The Village may conduct negotiations with the top Contractor(s) if required to determine the acceptability of the proposal in regards to specifications, terms and conditions and cost; therefore, the proposal(s) submitted should contain the Contractor's most favorable terms and conditions as well as cost with detailed specifications as proposed, since the selection and award may be made without discussion.

The Village will select the highest rated, fully qualified and best suited Contractor for mosquito abatement services. Should the first selected Contractor be unable to fulfill the terms of the contract, the Village reserves the right to enter into a contract with the 2nd selected Contractor. If the Village does not find that any Contractor's solution(s) meet the needs and requirements, the Village is not obligated to enter into any agreement.

H. Term of Contract

The In accordance with terms mentioned in Section 24.1 above, the contract term shall be three (3) complete calendar years starting from date of award (approximately May 1 of 2022) and ending December 31 of 2024.

I. Surveillance and Monitoring of Mosquito Populations

The Contractor shall coordinate with the Village Forester on a weekly basis as to the status of mosquito populations in the area. This includes but is not limited to the House Mosquito (*Culex pipens*) and the Floodwater Mosquito (*Aedes vexans*). Both parties shall convey observed or reported mosquito problems, including data from State of Illinois and DuPage County Health Department traps. If the Contractor has mosquito abatement contracts in other adjacent communities, the Contractor shall report if and when these communities are observing high levels of mosquito populations (including but not limited to both House and Floodwater mosquitos) and if and when a spraying is scheduled.

J. Trade Name

In cases where an item is identified by a manufacturers name, trade name, catalog number, or reference, it is understood that the Contractor proposes to furnish the item so identified and does not propose to furnish an "equal" unless the proposed "equal" is definitely indicated therein by the Contractor. Reference to a specific manufacturer, trade name or catalog is intended to be descriptive but not restrictive and only to indicate to the prospective Contractor articles that will be satisfactory. The Village Forester reserves the right to approve as an equal, or to reject as not being an equal, any article the Contractor proposes to furnish which contains major or minor variations from specification requirements but which may comply substantially therewith. If alternate product other than the product listed is proposed the Contractor must submit the alternate with their proposal.

K. Larval Control

The Contractor shall perform one (1) application of up to 5320 roadside catch basins, inlets and manholes by bicycle using the extended residual slow release mosquito larvicide Natular™XRT with active ingredient spinosad for up to 180 day control. The Village Forester shall approve any and all alternative products proposed.

Subject to need and as authorized by the Village Forester, the Contractor shall perform one (1) booster application of up to 400 catch basins, inlets and manholes by bicycle using the extended residual slow release mosquito larvicide Natular™T30 (with active ingredient spinosad) for up to 30 days for late season control. The Village Forester shall approve any and all alternative products proposed.

Applications shall be performed via a minimum of four (4) bicycles to reduce the Village's carbon footprint. All applications are to be completed within a one (1) week timeframe. GIS data for both applications showing the number and location of treated basins must be available for review after each application.

L. **Adult Mosquito Control**

As authorized by the Village of Downers Grove, the Contractor shall furnish sufficient equipment, equipment operators and material to conduct ground ultra low volume (ULV) applications of dual-action mosquito adulticide Duet (with active ingredients prallethrin and sumithrin) along up to 167 miles of improved or semi-improved streets within the incorporated Village limits. The ULV application shall be performed with a minimum of four (4) trucks with mounted equipment on the designated date. All mounted equipment shall have flow controls to guarantee 95% accuracy in chemical output and shall be properly calibrated such that the chemical flow rate is consistent with the Illinois Environmental Protection Agency's labeled maximum for truck specifications.

Applications shall be made between sunset on the one (1) designated day the Village requests treatment and sunrise on the following day. In the event weather conditions change during the application period which reduces the effectiveness of the ULV application, the Contractor shall terminate the application and shall complete the application at a time when weather conditions are favorable for a ULV application as approved by the Village. The Village Forester shall approve any and all alternative products proposed, and includes but is not limited to bee research and product toxicity to endangered species.

Adjacent communities/governments including but not limited to Lisle, Lombard, Oak Brook, Westmont, Darien, Woodridge, Downers Grove Township and Lisle Township may also be scheduling adulticide applications. The Contractor must indicate in their submittal how their spraying activities shall be coordinated with adjacent communities/governments.

M. **Material Specifications, Label and Safety Data Sheet**

The Contractor shall supply the Village Forester with the most current Label and Safety Data Sheet (SDS) available for the proposed products. The Contractor is responsible for following the Label and SDS requirements for personal protective equipment and safe chemical handling. The Contractor must meet OSHA and any other federal, state and local safety requirements. The Contractor shall be held responsible for any damage to personnel, Village facilities, chemicals and equipment, and must follow all product specifications to ensure safe product application. The Contractor must ensure that all necessary personal protective equipment is properly used, which is considered incidental to the contract.

N. Proof of Purchase

Prior to starting the project, the Contractor shall be required to show proof of purchase of specified products.

O. Expiration Dates of Product/ Supplies

Any required product and/or supplies that have expiration dates must have at least nine (9) months of shelf life before the expiration date. Failure to comply with this requirement may result in rejection of any product and/or supplies to be used. If the product is rejected, the Contractor shall be responsible for replacement within forty eight (48) hours at no additional cost to the Village.

P. Response Time and Completion Timeframes

Once notified by the Village Forester of the need to apply larvicides, the Contractor shall schedule the work, generally in early June. Once larvicide applications have begun, all applications within the Village limits shall be completed within a one (1) week timeframe unless changes are approved by the Village Forester. Subject to need, timing of booster applications shall be discussed with the Contractor.

Once notified by the Village Forester of the need for an adulticide spray application, the Contractor shall schedule the work to occur within a one (1) week timeframe. Once spraying has begun, all spraying applications within the Village limits shall be completed within a 24-hour timeframe unless changes are approved by the Village Forester. Subject to need, if a second application is warranted, the Contractor shall schedule the work to occur within a one (1) week timeframe. Once spraying has begun, all spraying applications within the Village limits shall be completed within a 24-hour timeframe unless changes are approved by the Village Forester.

Q. Spills

The Contractor is solely responsible for any and all spills or leaks prior to and during unloading or transporting of their product. The Contractor hereby agrees to reasonably evacuate and warn those persons that may be affected by the spill and must clean up such spills or leaks to the satisfaction of the Village and in a manner that complies with applicable federal, state and local laws and regulations. The Contractor shall be responsible for any costs associated with spill clean-ups.

R. Clean Up

The Contractor shall, during the progress of the work, remove and dispose of all materials and product containers at an approved waste disposal facility outside the Village. The Contractor shall remove all materials, tools, vehicles, equipment, and products from the Village after any and all applications have been completed. The Contractor shall not store any materials, tools, vehicles, equipment or products on Village facilities.

S. **Unauthorized Product Application**

The Contractor must not apply any unauthorized product materials or make unscheduled applications. If the Contractor does apply unauthorized product materials, or make unscheduled applications, the Contractor is responsible for all damages and replacement and/or clean-up of all damaged areas, plants, flowers, etc. caused by such unauthorized application or unscheduled application.

T. **Treatment Area Maps**

A map of incorporated Downers Grove shall be distributed at the informational pre-proposal meeting. Various Village maps can be found at the Village's website at http://www.downers.us. Before any planned application and treatments, the Contractor and Village Forester shall review routes, streets and catch basin locations.

U. **Illinois Department of Agriculture Pesticide License and Regulations**

The Contractor must supply proof that a minimum of ten (10) equipment operators currently have the appropriate State of Illinois Department of Agriculture Pesticide applicator or operator licenses. The Contractor must ensure all employees with applicator and operator licenses are properly trained to apply the insecticide treatments and be authorized to purchase the items needed to perform mosquito control at the time the proposal is submitted. As part of the submittal, the Contractor must provide 2020 and 2021 lists including the names, pesticide license numbers and expiration dates for all Illinois Department of Agriculture Pesticide applicators or operators. Copies of all certifications and licenses are to be furnished upon request. The Contractor shall keep records of all pesticide applications in accordance with laws and regulations of the Illinois Pesticide Act including but not limited to the EPA registration number and either the brand name or product name of the pesticide, the date and amount applied, and the location at which the pesticide was mixed and or loaded into the application equipment.

V. **Contractor Personnel, Equipment and Vehicles**

The Contractor shall supply all material, equipment and personnel necessary to complete the work specified. The Contractor shall rent equipment as needed to cover any equipment breakdowns that would cause this contract to not be completed in the allotted time period. All vehicles and equipment shall have the Contractor's name in a visible location. The Contractor shall provide a list of all equipment and vehicles to be used on a workday, with a minimum of four (4) trucks with mounted ULV equipment and a minimum of four (4) bicycles.

The Contractor shall employ only competent and efficient employees. All employees and supervisors shall wear uniforms or apparel clearly displaying the company name for ease of identification. All individuals shall be familiar with the mosquito abatement specifications. The Village Forester or other Village representative shall have, throughout the life of the contract, the right of reasonable rejection and approval of staff assigned to the work by the Contractor. If the Village Forester or other Village representative rejects staff, the Contractor must provide replacement staff satisfactory to the Village Forester or other Village representative in a timely manner and at no additional cost to the Village. The day-to-day supervision and control of the Contractor's employees is the responsibility solely of the Contractor.

W. **Automatic Vehicle Location (AVL) and Global Positioning System (GPS)**

Contractor shall provide complete AVL/GPS technology for the purpose of tracking abatement activities. The AVL/GPS system shall be accessible via the internet on a secure website available to authorized Village staff, with a login and password. The AVL/GPS system shall include and initiate broadcasting data when abatement activities are activated or to begin.

In order for the Village to monitor the efficiency of the spraying operation, the following information shall be provided by the AVL:

- SPEED: The speed of the vehicle during the abatement operation shall be monitored. The AVL shall be able to determine when the vehicle is performing the operation and report the vehicle speed. This speed shall be measured in one mile per hour increments. The AVL shall be able to measure speeds accurately from a minimum of 3 miles per hour to a maximum of 40 miles per hour.
- TRACKING: The accuracy of the vehicle's location shall be to within 50 feet or less of the actual location. The AVL shall show the following but not limited – spray on or off, and the location of a single vehicle or all the vehicles. It is preferred that the vehicle's location be displayed on street map window with user controlled sizing and placement. Data shall be submitted at a minimum, to include but not be limited to 30 second intervals to the secured website for monitoring.
- MANAGEMENT REPORTS: As a minimum, daily management reports on all the vehicles shall be provided by the AVL to include routes traveled, and the time of day the routes were traveled.
- RELIABILITY: The AVL shall maintain a 95% performance level.
- COVERAGE: The AVL coverage area shall include all of the Village of Downers Grove.
- FREQUENCY: All monitored functions shall be available upon the request of the Village's inspector/representative or his/her designee.

In order for the Village to monitor the efficiency of the larvicide applications, the following information shall be provided by the GPS technology:

- TRACKING: The accuracy of the GPS's location shall be to within 5 feet or less of the actual location.
- MANAGEMENT REPORTS: As a minimum, daily management reports on all the bicycles shall be provided to include routes traveled, and the time of day the routes were traveled.
- COVERAGE: The coverage area shall include all of the Village of Downers Grove.
- FREQUENCY: All monitored functions shall be available upon the request of the Village's inspector/representative or his/her designee.

X. **Work Crew Supervision**

The Contractor shall provide qualified supervision of each crew at all times while working under this contract. Each supervisor shall be fluent in English and be authorized by the

Contractor to accept and act upon all directives issued by the Village Forester or other Village representative.

Y. Workdays, Working Hours, and After Hours Contact

The Contractor shall schedule larvicide activities between 7:00 a.m. and 5:00 p.m., and adulticide spraying activities between the hours of 8:00 p.m. and 5:00 a.m., Monday through Friday, unless authorized by the Village Forester or other Village representative.

The Contractor shall supply a 24 hour, 7 day a week emergency contact phone number which shall be more than just an answering machine in case an emergency situation arises which needs to be discussed.

Z. National Pollutant Discharge Elimination System (NPDES) Permit and Annual Report

In accordance with the provisions of the Illinois Environmental Protection Act, the Illinois Pollution Control Board and Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter 1), and the Clean Water Act, the Contractor shall obtain a NPDES Permit. This includes filing an Annual Report with the Illinois Environmental Protection Agency (IEPA). The Annual Report is to include the NPDES permit number, contact information, the pesticide use pattern and target pests, and the total amount of each pesticide product applied for the reporting year by the USEPA pesticide registration number(s). A copy of the NPDES permit and Annual Report shall be supplied to the Village as proof of coverage.

AA. Endangered Species, Pollinator Gardens and Residential Beehives

The Village contains areas of high potential zones for an endangered species (Rusty Patched Bumble Bee). The Contractor shall follow all Illinois Department of Natural Resources (IDNR) protocols concerning endangered species and Rusty Patch Bumble Bee zones. In the submittal, the Contractor must provide approved plans for treatment protocols and indicate five (5) areas where this protocol has been utilized in Illinois.

The Village areas and pollinator gardens will be identified and discussed with the awarded Contractor.

Residential beehives are present throughout Downers Grove. In the submittal, the Contractor must provide plans for monitoring, contacting and interacting with beehive owners including but not limited to DriftWatch.

AB. Hotline, Call List and No Spray List, and Web Based Service Portal

The Contractor shall maintain a toll-free (800) hotline number which residents may call to inquire about spraying, or ask to be placed on either a call list or no spray list, or both. The Contractor shall notify all on the call list at least 24 hours prior to scheduled spray activities. The Contractor shall honor the no spray list by turning off their spray equipment at each address that requests such.

The Contractor shall provide a web based customer portal. Any service customer or resident in the service area should be able to sign-up for the Customer Portal from website, sign up for and

manage night time mosquito control notifications via email or text (for receipt within 24 hours before a scheduled treatment), and contact a Customer Care team.

AC. Traffic Control

The Contractor shall conduct its operations in a manner that will not interrupt pedestrian or vehicle traffic except as approved by the Village. The work area shall be confined to the smallest area possible to allow maximum use of the street or sidewalk and to minimize any hazard to traffic or pedestrians.

AD. Inspection of Work

All work shall be completed to the satisfaction of the Village Forester or Forestry representative and same shall resolve any questions as to proper procedures or quality of workmanship.

AE. Unsatisfactory Work

If, at any time during the contract, the service performed or work done by the Contractor is considered by the Village to create a condition that threatens the health, safety, or welfare of the community, the Contractor shall, on being notified by written notice, immediately correct such deficient service or work. In the event the Contractor fails, upon written notice, to correct the deficient service or work, the Village shall have the right to order correction of the deficiency by separate contract or with its own resources at the expense of the Contractor as stated in Section 28.2 above. The Village reserves the right to terminate the whole or any part of this contract in the event the awarded Contractor fails to perform any of the provisions of this contract.

AF. Costs and Basis of Payment

The Contractor affirms and states that the prices submitted herein constitute the total cost to the Village for all work involved in the respective items. This cost also includes all insurance, bonds, royalties, transportation charges, use of all tools and equipment, superintendence, overhead expense, inspection costs, all profits and all other work, services and conditions necessarily involved in the work to be done in accordance with the requirements of the Contract Documents considered severally and collectively.

The Contractor shall be paid for the work described herein on a per item basis for all of incorporated Downers Grove. The contract unit prices shall remain firm for the contract term.

The Contractor shall send all invoices to the Village Forester. The Village will pay the Contractor after receipt of a correct invoice for reasonable work allocable to the contract or after the date of acceptance of work that meets the contract requirements, whichever occurs later.

AG. Questions during the Proposal Process

All questions shall be directed to:

Kerstin G. von der Heide, Village Forester,
Phone (630) 434-5475 and FAX (630) 434-5495
Email: kvonderheide@downers.us

AH. Proposal Form Submission

Each proposer shall submit:

1. Proposers must submit one original of the total Proposal
2. Completed Cover page
3. Unit Prices and Extensions
4. Phone numbers for 24 hour contact, Hotline phone number, Web base portal
5. A listing of 2020 and 2021 equipment operators with Illinois Department of Agriculture pesticide applicator/operator licenses
6. A list of equipment and vehicles to be used on each workday, including AVL and GPS technology.
7. Description of how the service is to be provided. Include previous experience and examples from other municipalities. List at least five (5) municipal or other governmental references who can attest to the Contractor's previous satisfactory performance with similar contracts for mosquito abatement. Include names, addresses and phone numbers. The Contractor must indicate adult mosquito control treatment protocol to be followed for an endangered species (Rusty Patched Bumble Bee) and 5 areas where this protocol has been utilized in Illinois, as well as protecting residential beehives.
8. Signature block completed including an after-hours phone number other than an answering machine.
9. W-9 form
10. Proposer's Certification and applicable insurance information supplied
11. Completed Suspension or Debarment Certificate
12. Completed Campaign Disclosure Certificate.

IV. PROPOSER'S RESPONSE TO RFP

The undersigned Contractor offers to provide to the Village of Downers Grove, an Illinois municipal corporation, mosquito abatement services at the following prices and conforming to the terms and conditions of this RFP.

A. Unit Prices, Extensions and Totals
List Unit Prices, Extensions and Totals for each year. The Village Forester shall approve any and all alternative products proposed.

May 1, 2022 to December 31, 2022

Service	Est. Quantity	Unit Price	Extension
Application larvicide Natular™XRT	5320 catch basins	$6.10 per basin	$32,452.00
Application larvicide Natular™T30	400 catch basins	$3.80 per basin	$1,520.00
1st spray adulticide Duet to entire Village	1 complete spray 167 miles	$68.00 per mile	$11,356.00
2nd spray adulticide Duet to entire Village	1 complete spray 167 miles	$68.00 per mile	$11,356.00
Total for Mosquito Abatement Services for 2022			$56,684.00

*Product used for Village-wide applications will be Duet. Product choice based on Rusty Patched Bumble Bee endangered species compliance (see RPBB Protocol). Should the Village wish to utilize a botanical OMRI listed insecticide or other general Clarke offerings, pricing can be provided upon request.

Attach all pertinent labels and SDS sheets

January 1, 2023 to December 31, 2023

Service	Est. Quantity	Unit Price	Extension
Application larvicide Naturlar™XRT	5320 catch basins	$6.10 per basin	$32,452.00
Application larvicide Natular™T30	400 catch basins	$3.80 per basin	$1,520.00
1st spray adulticide Duet to entire Village	1 complete spray 167 miles	$68.00 per mile	$11,356.00
2nd spray adulticide Duet to entire Village	1 complete spray 167 miles	$68.00 per mile	$11,356.00
Total for Mosquito Abatement Services for 2023			$56,684.00

January 1, 2024 to December 31, 2024

Service	Est. Quantity	Unit Price	Extension
Application larvicide Naturlar™XRT	5320 catch basins	$6.10 per basin	$32,452.00
Application larvicide Natular™T30	400 catch basins	$3.80 per basin	$1,520.00
1st spray adulticide Duet to entire Village	1 complete spray 167 miles	$68.00 per mile	$11,356.00
2nd spray adulticide Duet to entire Village	1 complete spray 167 miles	$68.00 per mile	$11,356.00
Total for Mosquito Abatement Services for 2024			$56,684.00

COMBINED Total all 3 years = $170,052.00

B. Contact Phone Numbers, Hotline, and Web Based Portal

Name and phone number of 24- hour contact Emily Glasberg 847-421-9117

Eric Fishman 630-671-3020

Hotline Phone Number 800-942-2555

Web Based Portal clarkeportal.com

C. Personnel

The Contractor must supply proof that a minimum of ten (10) equipment operators currently have the appropriate State of Illinois Department of Agriculture Pesticide applicator or operator licenses and that they are properly trained to apply the insecticide treatment. As part of the submittal, the Contractor must provide 2020 and 2021 lists including the names, pesticide license numbers and expiration dates for all Illinois Department of Agriculture Pesticide applicators or operators who shall be present each workday.

D. Equipment

Attach a list of equipment and vehicles, including spray equipment, to be used on each workday

E. Description of service

Attach a description of how the mosquito abatement service shall be provided, including but not limited to larviciding, adulticiding, and protocols for endangered species and residential beehives. Include previous experience and examples from five (5) other municipalities, including AVL/GPS technology. The Contractor must indicate in their submittal how their spraying activities shall be coordinated with adjacent communities/governments.

2020

First Name	Last Name	License No	State	Operator/ Applicator	Expiration Date
Dylan	Adkins	CO4512	IL	Operator	12/31/2020
Karina	Angeles	CO7696	IL	Operator	12/31/2021
Shaun	Armstead	CO8294	IL	Operator	12/31/2021
Jennifer	Baltic	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Zachary	Bechta	CO8077	IL	Operator	12/31/2021
Kyle	Belina	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Alexander	Bergendorf	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Casey	Berner	CO7874	IL	Operator	12/31/2021
DeMar	Binns	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Julian	Bok	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Marty	Brannaman	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Calvin	Brooks	CO3267	IL	Operator	12/31/2020
Tim	Brooks	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
David	Buendia	CO4513	IL	Operator	12/31/2020
Kelly Buffini	Buffini	CO7987	IL	Operator	12/31/2021
Nicholas	Buranicz	CO8480	IL	Operator	12/31/2021
Gianluca	Caruso	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Anthony	Catano	CO8182	IL	Operator	12/31/2021
Sean	Caulkins	CA100221	IL	Operator	12/31/2020
Noe	Centeno	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Trey	Cervantes	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Emily	Change	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Alexander	Chara	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Ryan	Chittenden	CO98412	IL	Operator	12/31/2021
Brian	Christopher	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Luke	Ciancio	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Alexander	Clanten	CO7923	IL	Operator	12/31/2021
Robert	Clarke	CA55940	IL	Applicator	12/31/2021
Jose	Colin	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
David	Compton	CO64904	IL	Operator	12/31/2020
Ron	Corona	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Summer	Corsolini	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Jacob	Day	CO9062	IL	Operator	12/31/2021
John	DeConcillis	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Daniel	Delos Santos	CO7583	IL	Operator	12/31/2021
Derek	Denton	CO88142	IL	Operator	12/31/2020
Ben	DiFranco	CO7924	IL	Operator	12/31/2021
Mark	Dodd	CO7595	IL	Operator	12/31/2021
James	Donofrio	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
William	Dux	CA99834	IL	Applicator	12/31/2020
Scott	Dyokas	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Jack	Dzierzanowski	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Carl	Ekins	CO88154	IL	Operator	12/31/2021
Joseph	Ellman	CO88144	IL	Operator	12/31/2021
Michael	Ellman	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Brice	Erdrich	CO8888	IL	Operator	12/31/2021

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Andrew	Esch	CO8297	IL	Operator	12/31/2021
Gustavo	Espinoza	CA100491	IL	Applicator	12/31/2020
Daniel	Fachet	CO73347	IL	Operator	12/31/2020
Hector	Farias	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Eric	Fishman	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Ann Marie	Fox	CO3566	IL	Operator	12/31/2020
Hannah	Frugia	CA104926	IL	Applicator	12/31/2021
Akira	Fujiwara	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Vincent	Furlin	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Brianna	Garza	CA89419	IL	Applicator	12/31/2022
Mariano	Geanconteri	CO80364	IL	Operator	12/31/2021
Connor	Gillespie	CO7700	IL	Operator	12/31/2021
Kara	Glavan	CO8187	IL	Operator	12/31/2021
John	Godziszewski	CO4150	IL	Operator	12/31/2020
Eric	Goebel	CA100523	IL	Applicator	12/31/2021
Ulices	Gomez	CO8185	IL	Operator	12/31/2021
Lilliana	Gonzalez	CO4517	IL	Operator	12/31/2020
Travis	Grana	CA95821	IL	Applicator	12/31/2022
Jake	Hafertepe	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Olivia	Halfman	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Jaron	Hall	CO4519	IL	Operator	12/31/2020
Chad	Handyside	CO7688	IL	Operator	12/31/2021
Patrick	Hartnett	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Lee	Heeley	CO74377	IL	Operator	12/31/2020
Raymond	Henker	CO76215	IL	Operator	12/31/2021
Cesar	Herrera	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Jessica	Hertel	CO7598	IL	Operator	12/31/2021
Abraham	Holtermann	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Marina	Hopgood	CO7877	IL	Operator	12/31/2021
Stephanie	Hornik	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Connor	Hourigan	CO8186	IL	Operator	12/31/2021
Noah	Hunter	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Kyle	Hutton	CO9094	IL	Operator	12/31/2021
Eugene	Jackson	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Bridgitte	Janowick	CA102676	IL	Applicator	12/31/2020
Cheryl	Jarka	CO7992	IL	Operator	12/31/2021
Alexander	Jarosik	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Amanda	Jarosik	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Peter	Jeske	CO8301	IL	Operator	12/31/2021
Mark	Jette	CO4522	IL	Operator	12/31/2020
Alexander	Joens	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Erik	Jones	CO3750	IL	Operator	12/31/2020
Alex	Jorgensen	CO4809	IL	Operator	12/31/2020
Dan	Kenneally	CA98469	IL	Applicator	12/31/2022
Samuel	Kerner	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Dayton	Kimbark	CO4098	IL	Operator	12/31/2020
Chris	Klawitter	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020

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Gwen	Klinkey	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Jessica	Komperda	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Ernest	Kopec	CO8187	IL	Operator	12/31/2021
Ruslan	Kostetskky	CO7948	IL	Operator	12/31/2021
Madelynn	Kutsch	CO3458	IL	Operator	12/31/2020
Caden	Lafond	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
John	Lasse	CO7994	IL	Operator	12/31/2021
Paul	Latshaw	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Thomas	Leitsch	CO64620	IL	Operator	12/31/2021
Nicolas	Lettecci	CO4158	IL	Operator	12/31/2020
Nick	Lettecci	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Jason	Levigne	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Andrea	Lewis	CO5163	IL	Operator	12/31/2020
Jacqueline	Lindeman	CA95378	IL	Applicator	12/31/2022
Charlotte	Linnartz	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Kevin	Litwin	CO5094	IL	Operator	12/31/2020
Sofija	Lopotaite	CO7879	IL	Operator	12/31/2021
Celia	Luna	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Brandy	Lundeen	CO9063	IL	Operator	12/31/2021
Michael	Lynch	CO7949	IL	Operator	12/30/2021
Gerardo	Macias	CO8380	IL	Operator	12/31/2021
Nicolas	Macko	CO4104	IL	Operator	12/31/2020
Gina	Magro	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Alexander	Majcher	CO7951	IL	Operator	12/31/2021
Sarah	Majka	CO7876	IL	Operator	12/31/2021
Joseph	Majovsky	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Donovan	Maloney	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Jeremy	Manalansan	CN04443	IL	Operator	12/31/2020
Jacolby	Maxwell	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Mariah	McClain	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Brendan	McGowan	CO4166	IL	Operator	12/31/2020
Timothy	McGowan	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Pete	McNeil	CA98921	IL	Applicator	12/31/2020
Fernando	Medrano	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Erik	Menheer	CO3526	IL	Operator	12/31/2020
Billy	Michaels	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
John	Milazzo	CO91514	IL	Operator	12/31/2021
Douglas	Miller	CA82295	IL	Applicator	12/31/2021
Cole	Miller	CO7995	IL	Operator	12/31/2021
Matt	Miller	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
William	Mitchell	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Russell	Morales	CA100481	IL	Applicator	12/31/2020
Taylor	Morioka	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Gerald	Mroz	CO73535	IL	Operator	12/31/2020
Colleen	Murphy	CO8190	IL	Operator	12/31/2021
Siddharth	Mutyala	CO8470	IL	Operator	12/31/2021
Raymon	Nance	CO7496	IL	Operator	12/31/2021

2020

Carlton	Neinhouse	CO4537	IL	Operator	12/31/2020
Cary	Netchin	CO8471	IL	Operator	12/31/2021
Luke	Nordman	CO7582	IL	Operator	12/31/2021
Nicolas	Noto	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Andrei	Nylund	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Jobanny	Ocampo	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Matuesz	Ostazewski	CO4171	IL	Operator	12/31/2020
Andrei	Patano	CO4382	IL	Operator	12/31/2020
Ishan	Patel	CO8382	IL	Operator	12/31/2021
Vishva	Patel	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Jeff	Paul	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Thomas	Pemrick	CO4173	IL	Operator	12/31/2020
Alexander	Petersen	CO4112	IL	Operator	12/31/2020
Ryan	Philp	CO4820	IL	Operator	12/31/2020
Sarah	Pilewski	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Cate	Poplar	CO7996	IL	Operator	12/31/2021
Patrick	Proctor	CO5099	IL	Operator	12/31/2020
Tommy	Purdom	CA89414	IL	Applicator	12/31/2022
Bill	Quinn	CA09577	IL	Applicator	12/31/2021
Leonard	Radtke	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Nick	Raso	CO7881	IL	Operator	12/31/2021
Mike	Rattana	CO3458	IL	Operator	12/31/2020
Jonathan	Reese	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Jacob	Rexilius	CO94210	IL	Operator	12/31/2020
Corey	Richards	CO7459	IL	Operator	12/31/2021
Adam	Riha	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Carter	Riley	CO3459	IL	Operator	12/31/2020
Maison	Riser	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Marty	Rovner	CO9065	IL	Operator	12/31/2021
Michael	Ruth	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Joel	Ruvalcaba	CO4527	IL	Operator	12/31/2020
Sela	Saccameno	CO7577	IL	Operator	12/31/2021
Colin	Safford	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
George	Salgado	CO95361	IL	Operator	12/30/2020
Salvador	Sandoval	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Robert	Sarsfield	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Ryan	Sauers	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Caitlin	Saville	CO8310	IL	Operator	12/31/2021
Nicholas	Schellinger	CO4117	IL	Operator	12/31/2020
Kim	Schulke	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Abigail	Schuster	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Matthew	Seafield	CO4392	IL	Operator	12/31/2020
Andrew	Seafield	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Michelle	Selander	CA86372	IL	Applicator	12/31/2022
Michelle	Selander	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Cardazure	Selph	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
ergio	Serna	CO8000	IL	Operator	12/31/2021

2020

Parth	Shah	CO4177	IL	Operator	12/31/2020
Kamil	Sitko	CO64897	IL	Operator	12/31/2020
Elisabeth	Skeens	CO4396	IL	Operator	12/31/2020
Adam	Slater	CA86421	IL	Applicator	12/31/2020
Kevin	Smalley	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Rita	Smith	CO9040	IL	Operator	12/31/2021
Ben	Solak	CO4394	IL	Operator	12/31/2020
Amelia	Staniszewski	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Katherine	Steiner	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Joshua	Sternquist	CA100882	IL	Applicator	12/31/2021
Ryan	Stockman	CA101798	IL	Applicator	12/31/2021
Jeremy	Stoltzner	CA44094	IL	Applicator	12/31/2021
Brandon	Strickland	CO95622	IL	Operator	12/31/2020
Trevor	Sudis	CO4828	IL	Operator	12/31/2020
Clint	Swims	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Pawel	Szymczyk	CO92071	IL	Operator	12/31/2020
David	Szymczyk	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Alex	Talarski	CO7581	IL	Operator	12/31/2021
David	Tanis	CO50481	IL	Operator	12/31/2021
Michael	Tanzillo	co8002	IL	Operator	12/31/2021
Vincent	Tasso	CO86422	IL	Operator	12/31/2020
James	Travnicek	CO8312	IL	Operator	12/31/2021
Tyiesha	Trina	CO4123	IL	Operator	12/31/2020
Yuritzy	Valera-Rodrigue;	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
tyler	Vappa	CO7870	IL	Operator	12/31/2021
Jesse	Visby	CO4186	IL	Operator	12/31/2020
Niko	Voules	CO4536	IL	Operator	12/31/2021
Danny	Wagner	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Amanda	Watkins	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Kiley	Weber	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Laney	Weber	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Daniel	Webster	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Wade	Weikart	CA103553	IL	Applicator	12/31/2021
Austin	Weinell	CO74802	IL	Operator	12/31/2021
Ed	Welther	CO74605	IL	Operator	12/31/2020
Nancy	Williams	CO4538	IL	Operator	12/31/2020
James	Wojcik	CA100223	IL	Applicator	12/31/2020
Diane	Young	IDA COVID-19 Protocol Operator	IL	Operator	12/31/2020
Daniel	Zak	CO3862	IL	Operator	12/31/2020

2021

Clarke Operator/ Applicator License List

First Name	Last Name	License No	State	Operator/ Applicator	Expiration Date
Chuck	Adams	CO11293	IL	Operator	12/31/2023
Karina	Angeles	CO7696	IL	Operator	12/31/2021
Shaun	Armstead	CO8294	IL	Operator	12/31/2021
Will	Bartos	CO91839	IL	Operator	12/31/2023
Zachary	Bechta	CO8077	IL	Operator	12/31/2021
Casey	Berner	CO7874	IL	Operator	12/31/2021
Kelly Buffini	Buffini	CO7987	IL	Operator	12/31/2021
Nicholas	Buranicz	CO8480	IL	Operator	12/31/2021
Chandler	Carrico	CO11294	IL	Operator	12/31/2023
Anthony	Catano	CO8182	IL	Operator	12/31/2021
Ryan	Chittenden	CO98412	IL	Operator	12/31/2023
Alexander	Clanten	CO7923	IL	Operator	12/31/2021
Robert	Clarke	CA55940	IL	Applicator	12/31/2021
Crystal	Davis	CA101325	IL	Applicator	12/31/2023
Jacob	Day	CO9062	IL	Operator	12/31/2021
John	DeConcillis	pending - submitted 5/1	IL	Operator	12/31/2023
Daniel	Delos Santos	CO7583	IL	Operator	12/31/2021
Ben	DiFranco	CO7924	IL	Operator	12/31/2021
Mark	Dodd	CO7595	IL	Operator	12/31/2021
Carl	Ekins	CO88154	IL	Operator	12/31/2021
Joseph	Ellman	CO88144	IL	Operator	12/31/2021
Michael	Ellman	pending - submitted 5/1	IL	Operator	12/31/2023
Brice	Erdrich	CO8888	IL	Operator	12/31/2021
Andrew	Esch	CO8297	IL	Operator	12/31/2021
Daniel	Fernandez	pending - submitted 5/1	IL	Operator	12/31/2023
Eric	Fishman	pending - submitted 5/1	IL	Operator	12/31/2023
Hannah	Frugia	CA104926	IL	Applicator	12/31/2021
Brianna	Garza	CA89419	IL	Applicator	12/31/2022
Mariano	Geanconteri	CO80364	IL	Operator	12/31/2021
Connor	Gillespie	CO7700	IL	Operator	12/31/2021
Kara	Glavan	CO8187	IL	Operator	12/31/2021
Max	Glavan	pending - submitted 5/1	IL	Operator	12/31/2023
Eric	Goebel	CA100523	IL	Applicator	12/31/2021
Ulices	Gomez	CO8185	IL	Operator	12/31/2021
Travis	Grana	CA95821	IL	Applicator	12/31/2022
Jake	Hafertepe	pending - submitted 5/1	IL	Operator	12/31/2023
Chad	Handyside	CO7688	IL	Operator	12/31/2021
Patrick	Hartnett	pending - submitted 5/1	IL	Operator	12/31/2023
Raymond	Henker	CO76215	IL	Operator	12/31/2021
Jessica	Hertel	CO7598	IL	Operator	12/31/2021
Marina	Hopgood	CO7877	IL	Operator	12/31/2021
Connor	Hourigan	CO8186	IL	Operator	12/31/2021
Kyle	Hutton	CO9094	IL	Operator	12/31/2021
John	Jackman	CO92069	IL	Operator	12/31/2023
Jeffrey	Jacob	CO92076	IL	Operator	12/31/2023
Cheryl	Jarka	CO7992	IL	Operator	12/31/2021
Peter	Jeske	CO8301	IL	Operator	12/31/2021
Dan	Kenneally	CA98469	IL	Applicator	12/31/2022
Ernest	Kopec	CO8187	IL	Operator	12/31/2021

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Clarke Operator/ Applicator License List

Ruslan	Kostetskky	CO7948	IL	Operator	12/31/2021
John	Lasse	CO7994	IL	Operator	12/31/2021
Paul	Latshaw	pending - submitted 5/1	IL	Operator	12/31/2023
Lauren	Lavezzi	CA67575	IL	Applicator	12/31/2023
Thomas	Leitsch	CO64620	IL	Operator	12/31/2021
Nick	Lettecci	pending - submitted 5/1	IL	Operator	12/31/2023
Jacqueline	Lindeman	CA95378	IL	Applicator	12/31/2022
Sofija	Lopotaite	CO7879	IL	Operator	12/31/2021
Brandy	Lundeen	CO9063	IL	Operator	12/31/2021
Michael	Lynch	CO7949	IL	Operator	12/30/2021
Gerardo	Macias	CO8380	IL	Operator	12/31/2021
Alexander	Majcher	CO7951	IL	Operator	12/31/2021
Sarah	Majka	CO7876	IL	Operator	12/31/2021
John	Milazzo	CO91514	IL	Operator	12/31/2021
Douglas	Miller	CA82295	IL	Applicator	12/31/2021
Cole	Miller	CO7995	IL	Operator	12/31/2021
Aidan	Morello	pending - submitted 5/1	IL	Operator	12/31/2023
Colleen	Murphy	CO8190	IL	Operator	12/31/2021
Siddharth	Mutyala	CO8470	IL	Operator	12/31/2021
Raymon	Nance	CO7496	IL	Operator	12/31/2021
Cary	Netchin	CO8471	IL	Operator	12/31/2021
Luke	Nordman	CO7582	IL	Operator	12/31/2021
Jobanny	Ocampo	pending - submitted 5/1	IL	Operator	12/31/2023
Ishan	Patel	CO8382	IL	Operator	12/31/2021
Cate	Poplar	CO7996	IL	Operator	12/31/2021
Tommy	Purdom	CA89414	IL	Applicator	12/31/2022
Bill	Quinn	CA09577	IL	Applicator	12/31/2021
Nick	Raso	CO7881	IL	Operator	12/31/2021
Corey	Richards	CO7459	IL	Operator	12/31/2021
Maison	Riser	pending - submitted 5/1	IL	Operator	12/31/2023
Austin	Robak	CO94794	IL	Operator	12/31/2023
Marty	Rovner	CO9065	IL	Operator	12/31/2021
Sela	Saccameno	CO7577	IL	Operator	12/31/2021
Robert	Sarsfield	pending - submitted 5/1	IL	Operator	12/31/2023
Ryan	Sauers	pending - submitted 5/1	IL	Operator	12/31/2023
Caitlin	Saville	CO8310	IL	Operator	12/31/2021
Michelle	Selander	CA86372	IL	Applicator	12/31/2022
ergio	Serna	CO8000	IL	Operator	12/31/2021
Rita	Smith	CO9040	IL	Operator	12/31/2021
Joshua	Sternquist	CA100882	IL	Applicator	12/31/2021
Ryan	Stockman	CA101798	IL	Applicator	12/31/2021
Jeremy	Stoltzner	CA44094	IL	Applicator	12/31/2021
Alex	Talarski	CO7581	IL	Operator	12/31/2021
David	Tanis	CO50481	IL	Operator	12/31/2021
Michael	Tanzillo	co8002	IL	Operator	12/31/2021
James	Travnicek	CO8312	IL	Operator	12/31/2021
Sharon	Valerius	CO7887	IL	Operator	12/31/2023
tyler	Vappa	CO7870	IL	Operator	12/31/2021
Niko	Voules	CO4536	IL	Operator	12/31/2021
Alexandria	Vukovic	CA100692	IL	Applicator	12/31/2023

2021

Clarke Operator/ Applicator License List

Danny	Wagner	pending - submitted 5/1	IL	Operator	12/31/2023
Amanda	Watkins	pending - submitted 5/1	IL	Operator	12/31/2023
Wade	Weikart	CA103553	IL	Applicator	12/31/2021
Austin	Weinell	CO74802	IL	Operator	12/31/2021

2022

First Name	Last Name	License No	State	Expiration Date	License Description	Expiration
Brianna	Garza	052-091845	IL	12/31/2022	Public Health	Expires In 304 day(s)
Brianna	Garza	CA89419	IL	12/31/2022	Department of Agriculture	Expires In 304 day(s)
Christian	Arellano	CO04388156	IL	12/31/2022	Department of Agriculture	Expires In 304 day(s)
Jacqueline	Lindeman	CA95378	IL	12/31/2022	Department of Agriculture	Expires In 304 day(s)
James	Zgoda	CA85394	IL	12/31/2022	Department of Agriculture	Expires In 304 day(s)
Michelle	Selander	CA86372	IL	12/31/2022	Department of Agriculture	Expires In 304 day(s)
Rhonda	Philp	CA91360	IL	12/31/2022	Department of Agriculture	Expires In 304 day(s)
Tommy	Purdom	CA89414	IL	12/31/2022	Department of Agriculture	Expires In 304 day(s)
Travis	Grana	CA95821	IL	12/31/2022	Department of Agriculture	Expires In 304 day(s)
Amanda	Watkins	CO12980	IL	12/30/2023	Department of Agriculture	Expires In 668 day(s)
Mariah	McClain	CA105679	IL	12/30/2023	Department of Agriculture	Expires In 668 day(s)
Patrick	Hartnett	CO13211	IL	12/30/2023	Department of Agriculture	Expires In 668 day(s)
Abigail	Schuster	CO12978	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Aidan	Morello	CO13088	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Alexandria	Vukovic	CA100692	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Andrea	Lewis	CO5163	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Andrei	Nylund	CO12840	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Andrew	Gentes	CA105677	IL	12/31/2023	Aquatics	Expires In 669 day(s)
Andrew	Gentes	CA105677	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Aubrey	Luczynski	pending	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Austin	Robak	CO94794	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Austin	Weinell	CO74802	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Bill	Quinn	052-073608	IL	12/31/2023	Public Health	Expires In 669 day(s)
Brendan	McGowan	CO4166	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Brian	Deenihan	CO12648	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Brittney	Jones-Royal	CO14018	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Brock	Heffner	CA105529	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Calvin	Wu	PENDING	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Cesar	Herrera	CA105604	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Chandler	Carrico	CA105698	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Chris	Desch	CO90861	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Christopher	Livesay	CO13376	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Chuck	Adams	CO11293	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Crystal	Davis	CA101325	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Daniel	Fachet	CO73347	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Daniel	Fernandez	CO13084	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Daniel	Wagner	CO12845	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Derek	Dillard	CA105690	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Derek	Drews	CA95823	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Derrick	Combs	CO13267	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Dontae	Jackson	pending	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Elizabeth	Jaiyeoba	CO13675	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Eric	Fishman	CA105330	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Ernie	Leonard	CO4889	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Felix	Jiminez	CO14258	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Garret	Fritz	CO13374	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Gwen	Klinkey	CO13276	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Hannah	Frugia	CA104926	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Jacqueline	Lindeman	052-092124	IL	12/31/2023	Public Health	Expires In 669 day(s)
Jaime	Korbecki	CO13646	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Jaime	Zepeda	CO13291	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Jake	Hafertepe	CO12974	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Jake	Nowalski	CO13831	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Jaylen	Timms	CO13792	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Jeff	Paul	CO8191	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)

2022

Jeffrey	Jacob	CO92076	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Jeremy	Stoltzner	CA44094	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Jobanny	Ocampo	CO93636	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
John	Jackman	CO92069	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Julie	Reiter	CO4479	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Justin	Jourdan	pending	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Justin	Prickett	CA105588	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Kersten	Hulsey	CO13274	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Kim	Schulke	CO4528	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Lauren	Lavezzi	CA67575	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Leonardo	Ceron	CO14244	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Luke	Ciancio	CO92068	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Mary Rob	Clarke	pending	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Max	Glavan	CO3741	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Meghan	Muscato	pending	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Michael	Ellman	CO12407	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Mitch	Fister	CO13270	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Nathan	Timm	CO13289	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Nick	Lettecci	CO4158	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Nicolas	Romano	PENDING	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Niko	Voules	CO4536	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Paul	Latshaw	CO11298	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Raymond	Henker	CO11941	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Ryan	Chittenden	CO98412	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Ryan	Sauers	CO11300	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Sam	Bryant	CO13486	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Sam	Premak	CO12977	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Sarah	Sebby	pending	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Sarah	Stone	CO13288	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Scott	Dyokas	PENDING	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Seth	Davenport	CO13490	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Sharon	Valerius	CO7887	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Thomas	Leitsch	CO64620	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Timothy	Glavan	CO13375	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Veronica	Orozco Sanchez	CO14260	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Vincent	Furlin	CO8299	IL	12/31/2023	Department of Agriculture	Expires In 669 day(s)
Bill	Quinn	CA09577	IL	12/31/2024	Department of Agriculture	Expires In 1035 day(s)

Clarke Environmental Mosquito Management, Inc.
2022 Fleet and Equipment

The following lists the Chicago fleet highlighted items are equipped with ULV equipment.

Clarke- Chicago Truck Fleet

Truck #	Year	Make	Model	VIN #	Office
100	2003	Chevrolet	Silverado 2500	1GCHK29U33E238396	Roselle
106	2003	Chevrolet	Silverado 2500	1GCHK24U33E291459	Roselle
108	2004	Chevrolet	Silverado 2500	1GCHK24U14E277643	Roselle
109	2005	Chevrolet	Silverado 2500	1GCHK24U55E214255	Roselle
110	2005	Chevrolet	Silverado 2500	1GCHK24U25E282318	Roselle
111	2005	Chevrolet	Silverado 2500	1GCHK24U45E314928	Roselle
112	2005	Chevrolet	Silverado 2500	1GCHK24U95E206949	Roselle
113	2006	Chevrolet	Silverado 2500	1GCHK29U96E237113	Roselle
120	2014	Chevrolet	Silverado 1500	1GCNCPEH6EZ319989	Roselle
121	2014	Chevrolet	Silverado 1500	1GCNCPEH4EZ340310	Roselle
122	2014	Chevrolet	Silverado 1500	1GCNCPEH0EZ337663	Roselle
123	2014	Chevrolet	Silverado 1500	1GCNCPEH5EZ325332	Roselle
138	2003	Chevrolet	Silverado 2500	1GCGC24U53Z102683	Roselle
139	2003	Chevrolet	Silverado 2500	1GCHC24U93Z217808	Roselle
140	2004	Chevrolet	Silverado 2500	1GCHC24U94E128801	Roselle
141	2004	Chevrolet	Silverado 2500	1GCHC24U74E157150	Roselle
142	2004	Chevrolet	Silverado 2500	1GCHC24U94E231524	Roselle
143	2004	Chevrolet	Silverado 2500	1GCHC24U34E147554	Roselle
150	2013	Chevrolet	Silverado 1500	1GCNCPEX4DZ170939	Roselle
151	2013	Chevrolet	Silverado 1500	1GCNCPEX4DZ213014	Roselle
152	2013	Chevrolet	Silverado 1500	1GCNCPEX7DZ190666	Roselle
153	2013	Chevrolet	Silverado 1500	1GCNCPEX2DZ220186	Roselle
185	2015	Chevrolet	Colorado	1GCHSAEA6F1257218	Roselle
186	2015	Chevrolet	Colorado	1GCHSAEA7F1257387	Roselle
187	2015	Chevrolet	Colorado	1GCHSAEA0F1264052	Roselle
188	2015	Chevrolet	Colorado	1GCHSAEA0F1264519	Roselle
189	2016	Chevrolet	Colorado	1GCHSBEA4G1101007	Roselle
195	1998	Dodge	RAM 3500	1B7MC33D9WJ128460	Roselle
197	2007	Chevrolet	Silverado 2500	1GCHK24U07E199019	Roselle
210	2017	Chevrolet	Colorado	1GCHSBEA3H1193213	Roselle
211	2017	Chevrolet	Colorado	1GCHSBEA7H1164295	Roselle
212	2017	Chevrolet	Colorado	1GCHSBEA9H1200374	Roselle
213	2017	Chevrolet	Colorado	1GCHSBEAXH1151542	Roselle
214	2017	Chevrolet	Colorado	1GCHSBEAXH1207625	Roselle
215	2017	Chevrolet	Colorado	1GCHTBEAXH1168290	Roselle

Truck #	Year	Make	Model	VIN #	Office
216	2017	Chevrolet	Colorado	1GCHTBEA5H1201549	Roselle
217	2013	Ford	F-150 Supercrew	1FTFW1ET4DFB92012	Roselle
234	2019	Chevrolet	Colorado	1GCHSBEA5K1295071	Roselle
235	2019	Chevrolet	Colorado	1GCHSBEAXK1135462	Roselle
239	2012	Toyota	Tacoma	5TFNX4CN4CX013930	Roselle
240	2013	Toyota	Tacoma	5TFNX4CN4DX024332	Roselle
407	2001	Chevrolet	Silverado 1500	1GCHC24U71Z265773	Roselle
ER1	2012	Toyota	Tacoma	5TFNX4CN9CX013714	Roselle
ER2	2012	Toyota	Tacoma	5TFNX4CN4CX013930	Roselle
ER3	2013	Toyota	Tacoma	5TFNX4CN4DX024332	Roselle
ER4	2013	Toyota	Tacoma	5TFNX4CN6DX020802	Roselle
ER5	2013	Chevrolet	Silverado 1500	1GCNCPEX8DZ173150	Roselle
ER6	2011	Ford	Fusion Hybrid	3FADP0L36BR223879	Roselle
L1	2010	Ford	Escape Hybrid	1FMCU5K30AKC15286	Roselle
L2	2011	Ford	Escape Hybrid	1FMCU5K37BKC64793	Roselle
L3	2012	Ford	Escape	1FMCU0C77CKC27636	Roselle
L4	2011	Ford	Escape Hybrid	1FMCU5K36BKC53817	Roselle
P1	2008	Toyota	Prius	JTDKB20U383440841	Roselle
P10	2010	Toyota	Prius	JTDKN3DU5A0027611	Roselle
P11	2009	Toyota	Prius	JTDKB20U993475837	Roselle
P12	2009	Toyota	Prius	JTDKB20U993523529	Roselle
P13	2012	Toyota	Prius	JTDKN3DU8C5399305	Roselle
P14	2013	Toyota	Prius Three	JTDKN3DU8D5571639	Roselle
P2	2008	Toyota	Prius	JTDKB20UX83406055	Roselle
P3	2008	Toyota	Prius	JTDKB20U487750702	Roselle
P4	2010	Toyota	Prius	JTDKB20UX93501104	Roselle
P7	2008	Toyota	Prius	JTDKB20U093476942	Roselle
P9	2010	Toyota	Prius	JTDKN3DU2A0028375	Roselle

Clarke Bicycle Fleet

Clarke's bicycle fleet is equipped with 20 bicycles.

CLARKE ENVIRONMENTAL MOSQUITO MANAGEMENT, INC.
Operational Plan and Scope of Work
For Village of Downers Grove
Environmental Mosquito Management:
A Biorational Approach to Protecting Public Health

The techniques and approach, outlined in this document, are the tools used to build a control strategy and program for a community.

Introduction

In the last century, the United States has faced outbreaks from several known mosquito borne illnesses, including West Nile Virus, St Louis Encephalitis, Eastern Equine Encephalitis, Yellow Fever, LaCrosse Encephalitis, Chikungunya, and most recently Zika virus. Our approach to the control of mosquitoes takes both public and environmental health into account, while simultaneously delivering proactive and efficient mosquito abatement services.

Our methodology is founded on the basic concepts of Integrated Pest Management (IPM), favoring the balanced use of cultural, biological and chemical procedures that are environmentally compatible and economically feasible to reduce mosquito populations to a tolerable level (Owens 1986). Consequently, we consider our control strategy as a process and not just a reaction (e.g. spraying and insecticide) to mosquito presence.

Taking IPM to the next level, we offer municipalities and their residents **Environmental Mosquito Management** programs that emphasize:

- **Surveillance and Monitoring**
  - Mosquito Borne Disease Monitoring
  - *Aedes vexans* Brood Prediction Model
  - Weather Monitoring
- **Industry Leading Mapping and Data Tracking**
  - GIS, GPS, GeoTab, and proprietary PRIUS Software for accurate data collection
- **Intensive Larval Control**
  - Optimized Control via PRIUS Database
  - Prescription Larval Control
- **Adult Control**
  - The adult mosquito control component of the Environmental Mosquito Management process involves careful and strategic chemical applications only when established thresholds (Vector Index, Minimum Infection Rate, etc.) are reached.
- **OMRI-Listed and EPA-approved products**
- **Entomological Consultation, Reporting, and Outreach**
  - Customized Reports
  - 5 Entomologists in Chicagoland Area
  - Public Relations Support

The objectives of the Environmental Mosquito Management program are to reduce the potential of mosquito-borne disease transmission in order to provide a healthy atmosphere for community residents.

Surveillance and Monitoring

The foundation of the Environmental Mosquito Management program is surveillance. Defining the distribution and density of target mosquito species in relation to human populations is essential to the success of any program at controlling disease vectors. A variety of surveillance tools are utilized to monitor mosquito populations. Below is a just small sample of traps used.

Surveillance Network

New Jersey Light Trap Network

An important supplement to any mosquito control program is a New Jersey Light Trap. Developed in the 1930s, the trap helps determine species diversity and monitors mosquito populations. These traps are located in residential areas and are operated between dusk and dawn (the peak activity period for many species) and should be maintained each year to identify historic and habitual mosquito sites.

A 25-watt bulb in the trap attracts mosquitoes, which are drawn into the trap via an electric fan. Data generated by the trap catches serve several purposes: it confirms the arrival of predicted floodwater mosquito migrations, reflects the effectiveness of mosquito control efforts and identifies fluctuations in adult mosquito populations.

West Nile Virus Surveillance Trap

A vital tool in adult mosquito and arbovirus surveillance is the West Nile virus, or gravid, trap. Developed by the Centers for Disease Control and Surveillance, the trap primarily collects gravid (*Culex*) mosquitoes (principal vectors of West Nile virus), which makes it particularly effective in tracking the disease. A gravid female mosquito has taken a blood meal and is ready to lay her eggs. Typically, (*Culex*) mosquitoes search for water rich in organic material to lay their eggs. If they've obtained their blood meal from an infected animal, they can transmit the virus to their eggs. The mosquitoes are captured live, which allows us to test them for arboviruses and get an early indicator that the virus is present in the area.

Centers for Disease Control and Prevention (CDC) Trap

Mosquitoes looking for a blood meal are mainly attracted by carbon dioxide, exhaled by humans and animals. The CDC trap provides carbon dioxide as bait, though dry ice (frozen carbon dioxide), and a light source to attract female mosquitoes. This trap is set out at prime activity hours for the species targeted. A fan draws mosquitoes into a net and the live mosquitoes are trapped for arbovirus testing. CDC traps often show a very high species diversity and large overall mosquito numbers, indicating the presence of a mosquito-borne virus and relative indices of adult mosquito species.

Mosquito-Borne Disease Monitoring. Clarke has played an integral role in the control of major public health vector-borne disease epidemics including the St. Louis encephalitis virus (SLE) in 1975, West Nile virus (WNV) 1999 – 2016 outbreaks, and Zika virus (ZIKV) 2016. The current number of WNV human cases has reached over 41,000, including over 1,700 fatalities.

We have helped public health agencies address the issue of preparedness to handle sporadic and outbreak-associated vector-borne diseases by establishing proactive laboratory-based surveillance, prevention and control programs to limit the impact of the virus in the United States. Our surveillance databases provide an early warning system to protect public health from WNV and other mosquito-borne diseases. Since 1999 Clarke has conducted gravid and ABC CO_2 trapping of the *Culex* for the testing of WNV. In addition, we provide BG Sentinel, Gravid Aedes Trap (GAT) and I2Care trapping for *Aedes aegypti* and *Ae. albopictus*. Based on the environmental additional trapping has been used to collect mosquitoes. Mosquitoes collected from traps are identified, sorted and counted by biologists and interns. Both RAMP and PCR testing is used to monitor for WNV. Surveillance results have been shared with CDC, state, county and local governmental agencies.

***Aedes vexans* Brood Prediction.** During the course of a season, *Aedes vexans* (floodwater) mosquito broods periodically migrate into a community and override the local larviciding effort. The precise knowledge of when peak periods will occur, in conjunction with light trap counts and public feedback, enables the accurate timing of adult mosquito control applications.

In 1967, Clarke developed a thermal summation technique which predicts the arrival of *Aedes vexans* broods and peak periods (Clarke and Wray 1967). The original manual charting technique has been modernized and incorporated in the Clarke PRIUS database. Consulting meteorologists provide the precipitation and temperature data for the model to track *Aedes vexans* brood patterns across the Midwest, including Cook County.

Weather Monitoring. Climatological data and weather conditions (wind velocity, temperature, and precipitation) are critical factors in the monitoring and control efforts of a mosquito management operation. For these reasons, Clarke has retained the services of certified consulting meteorologists since 1978. Daily forecast and storm warnings are used to ensure operations are performed during optimal conditions.

Mapping and Data Tracking

The basis of a community's mosquito control program is a comprehensive larval site survey. The objective of this survey is to clearly define, map, and categorize potential larval development sites. Clarke performs an aerial survey to systematically map all potential mosquito development sites within the community boundary. In preparation of the survey, a helicopter is utilized with a cartographer as well as ground survey teams. Larval sites are plotted using GIS layers, the acreage is measured and a reference number and habitat type are assigned. Computerized field inspection maps are developed from the master larval site survey. Other operational maps include harborage

areas, catch basins, fish stocking locations and aerial and truck adulticiding routes. These operational maps are updated annually to reflect community growth and development.

PRIUS Database. To implement the Environmental Mosquito Management program, Clarke utilizes a proprietary software system, PRIUS, for resource requirement planning, operational scheduling, larval site history tracking, adult mosquito population monitoring, NPDES compliance and budget/financial reporting.

Site-specific information is recorded for each mapped site. Data includes the sites that actually produce larvae, the time of season, frequency of larval occurrence and the species found in each site. This information ultimately serves to provide a field inspection and control strategy for each site within the community.

PRIUS provides a cost effective, site specific (prescription-oriented) plan that prioritizes field operations. Control pressure is maintained on the sites most likely to produce mosquitoes. PRIUS allows mosquito control programs to become more environmentally oriented, as larval control is performed specific to the needs of each site.

GPS/GEOTAB/SMARTFLOW: Clarke utilizes a fleet of 47 state of the art truck mounted ULV sprayers in the Chicago area. Each Clarke truck is outfitted with SmartFlow II (SMII) variable control and, GEOTAB. SMII allows the adult mosquito control equipment (the sprayer) to vary its chemical output based on the speed of the vehicle providing the correct amount of insecticide per acre at any speed below 24MPH. GPS allows Clarke to verify location and speed throughout the application allowing accurate application rates and effective treatments with real-time vehicle tracking.

GEOTAB, a fleet management system, is installed in every Clarke truck. This system allows managers to monitor driver behavior for improving overall safety and cutting fuel consumption.

Larval Control

The foundation and focus of the Environmental Mosquito Management program is the environmentally sensitive control of larvae within the community. Effective control of mosquito larvae will prevent their development into adult mosquitoes and therefore, reduce the need for adult mosquito control measures.

The key to environmentally oriented larval control is the organization and classification of active and potential larval development sites obtained from comprehensive larval site

surveys. Site data and mosquito activity is recorded in our PRIUS database for daily decision making and for seasonal data analysis.

Prescription-Oriented Larvicides. As noted in the IDPH publication, *Mosquitoes in Illinois, Recommendations for Prevention and Control* – 1988, a single insecticide may not be suitable for control of larvae in every habitat. For example, *Bacillus thuringiensis var. israelensis (Bti)* is effective against floodwater mosquitoes, in the relatively clean water of woodland pools, but it is much less effective against *Culex* spp. in polluted water. In polluted water VectoLex®, Natular™ or Altosid are much more effective. In addition, *Bti* is totally ineffective when used as a prehatch or pre-flood treatment (Clarke and Rowley 1984).

To achieve larval control, The Environmental Mosquito Management program utilizes the most environmentally sound and effective products presently available including, but not limited to, Natular™, VectoBac®, VectoLex®, and Altosid®. **Just as no one medicine is prescribed for all illnesses, no one larvicide is suitable for control of mosquitoes in every habitat.** PRIUS allows for prescription larval control, a pest management strategy based on habitat type and species history.

Catch Basin Control. The open street catch basin must be considered the primary *Culex* larval development area within a community. Heavy production of these mosquitoes is often found in water with high organic content, particularly in catch basins and sewage disposal plants. Retrospective observations following outbreaks of SLE and WNV, have suggested *Culex* development in catch basins as a major contributing factor (Mack et al. 1967; Covell & Resh 1971). Open street catch basins, inlets, and manholes will be treated with a sustained-release larvicide control product. Bicycle teams, teams walking or right-hand drive vehicles, all using GPS, are utilized to ensure proper placement into each catch basin.

The street catch basins will be treated on bikes using **Natular® XRT** for sustainability and lower carbon footprint. For additional information regarding Clarke's sustainability efforts use the following link: **www.clarke.com/sustainability**

Helicopter Larviciding. Helicopter prehatch applications are available to the Village utilizing residual larvicide products, such as Natular G30, to be used for large, inaccessible sites found to be developing larvae.

Source Reduction Recommendations to Resolve Sanitation Violations. As part of routine inspections, Clarke inspectors will note areas such as clogged ditches or streams, neglected swimming pools, and illegal tire and trash dump sites which could potentially be public health hazards. These violations will be outlined in reports, Clarke will assist the community's code enforcement and health officials in any way possible to permanently correct or eliminate these areas as larval development sites

Adult Mosquito Management

The adult mosquito management portion of the Environmental Mosquito Management process consists of two phases: harborage adulticiding and residential adulticiding. Adulticiding harborage areas where mosquitoes congregate can reduce the dispersal of the adult mosquito population into residential areas. As a result, residential adulticiding is limited only to periods during a health alert.

Adulticiding in Mosquito Harborage Areas. Harborage areas can be defined as cool, humid spots where adult mosquitoes congregate during sunny warm dry periods in the daytime hour, before undertaking localized feeding flights near dusk. The treatment of harborage areas with residual insecticides is often termed perimeter or 'barrier" treatments. Residual treatment of harboring vegetation not only controls adult mosquitoes within, but also often prevents rapid re-infestation to adjacent residential areas. Insecticides with longer residual effect are traditionally applied be a power backpack sprayer. Insecticides can also be applied by ULV misting with a truck or ATV to achieve a contact kill. Both methods can be used for public event treatments.

Adulticiding in Residential Areas. The decision to adulticide in a community is based upon multiple factors, including those listed below. Clarke entomologists are available to work with the Village to determine exact action thresholds.

- Increased risk based on Centers for Disease Control West Nile Virus Guidelines.
- Significant increase in the number of mosquitoes that can carry disease.
- Presence of West Nile virus (WNV) in mosquito batches.
- Vector Index (VI)
- Minimum Infection Rate (MIR)
- Weather contributing to an increase in mosquito populations.
- Confirmed human case of WNV or other mosquito-borne diseases.

Truck routes are designed to provide uniform and thorough coverage of all streets. Exact mileages are determined for each route. Post treatment email reports can be sent to the multiple contacts within the organization, following adult applications.

Adulticiding via Aircraft. In emergency situations when wide-scale adulticiding is needed, Clarke has aerial capabilities through our partnership with Dynamic Aviation.

Clarke and Dynamic Aviation are leading providers of mosquito control application services to federal, state and local governments throughout the United States. Our combined experience can ensure the reliability demanded by public health officials facing emergencies arising from flooding and mosquito vectored diseases.

Our Roselle based JetRanger 206IIIB is also equipped to provide smaller scale adult mosquito applications, if necessary.

Residential Adulticiding – Operational Guidelines. Once the decision has been made to perform a ULV application, adulticiding will be performed in accordance with the label.

Adulticide Products. All chemicals used in the adulticiding program shall be applied with strict compliance to state and federal EPA label recommendations. Primary adult mosquito control products used are Duet®, Biomist®, Merus™ and Zenivex. However, Clarke is able to provide applications using all EPA approved adult mosquito control products.

ULV Equipment. All truck mounted sprayers are cold-aerosol ultra-low-volume (ULV) machines. Either gas or electric powered equipment can be utilized. Routine preventative maintenance includes monthly droplet size testing and daily flow rate calibration checks

ULV Quality Control. Detailed spray route maps are the basis for residential and harborage ULV applications. At the conclusion of a ULV spraying, actual versus theoretical insecticide consumption amounts are analyzed via SmartFlow. Routes can be reviewed for accuracy using the GeoTab and SmartFlow II (see "Mapping & Data Tracking").

Environmental Mosquito Management Products

Products Proposed for Larval Control

Natular™ is the first and only complete formulation portfolio of larvicides with an active ingredient that is a product of a naturally occurring soil bacterium. All formulations, developed and manufactured exclusively by Clarke, contain the patented ingredient, spinosad. There are granular, tablet and liquid formulations to fit the variety of habitat situations that need to be larvicided. Natular is in a chemical class (IRAC Class 5) different from all other larvicides and has a unique mode of action, together helping fight resistance. Natular was recognized in 2010 with the **EPA Presidential Green Chemistry Challenge Award**. Available in six formulations, 5 **OMRI Listed** (Organic Materials Review Institute) all formulations are also made with inert ingredients that are on the EPA Minimal Risk List and Natular is the first larvicide evaluated as a Reduced Risk product by the EPA. **Natular XRT's have a residual of 180 days, so only one basin application is needed per season!**

Products Proposed for Adult Mosquito Control

1) **Duet® Dual-action Adulticide** - an advanced dual-action mosquito adulticide, combines the proven efficacy of sumithrin (the active ingredient found in Anvil) plus the exceptional knockdown of prallethrin. Together, these two active ingredients cause "benign agitation", a unique, non-biting excitation that draws mosquitoes from a resting state enabling greater control of the natural population. Highly effective against Culex, *Aedes aegypti* and *Ae. Albopictus* (Suman et.al. 2012).
    - Effectively controls more mosquitoes, more quickly
    - Duet's active ingredients break down by sunlight into carbon dioxide and water vapor.

Entomological Consultation, Reporting, and Outreach

Program Staff. Clarke maintains a professional and experienced staff. Clarke unitizes team approach to implement the Environmental Mosquito Management process. This team is led by Lyell Clarke, a Ph.D. in medical entomology, and includes a local staff of entomologists, biologists, cartographers, regulatory specialists, human resource specialists and safety personnel. In addition Clarke recruits a summer staff from major universities. When possible students are solicited from the life science disciplines and often receive college credits for an internship experience. All field personnel are trained and are licensed by the Illinois Dept. of Agriculture to perform mosquito control.

Clarke can also provide resistance testing, chemical viable and field operations efficacy and NPDES compliance.

Program Staff Quality Control. An important part of any mosquito control operation is the use of quality control supervisors. Post treatment control supervisors are used to confirm the performance and effectiveness of all seasonal and full-time personnel.

Public Relations. Release of accurate and well-timed information to the public is extremely important because an informed populace is much more likely to cooperate with and support mosquito control efforts. In addition they may be encouraged to protect themselves personally and reduce mosquito larval development on their private property. Public Relations support is available to the Village, at no additional charge, to assist with network and cable television interviews, radio interview, press releases, public service announcements and web site content. Presentations on all phases of mosquito control are available to interested civic groups, service clubs, and schools.

Insurance Coverage. Sound insurance protection is a fundamental responsibility of any pest control contractor. Clarke Environmental Mosquito Management has secured and will continue to maintain the highest coverage limits available in the market. The company currently has an insurance package with **$25 million coverage limits**, which includes bodily injury, property damage and comprehensive chemical liability for ground and air operations. The insurance policy specifically covers all aspects of mosquito control operations, including the application of insecticide products in residential areas.

Program Reports. Communication between the Village and Clarke is key to a successful program. Regular meetings are scheduled throughout the season to discuss the program. In addition, the Village will be provided reports outlining surveillance data, services performed, and program recommendations on a continuous basis. A comprehensive annual report is prepared for each community at the conclusion of the season.

REFERENCES CITED

Clarke, J.L., Jr., and F.C. Wray. 1967. Predicting Influxes of *Aedes vexans* in Urban Areas. Mosq. News 27:156-163.

Clarke, J.L., III, and W.A. Rowley. 1984. Evaluation of Granular *Bacillus thuringiensis var israelensis* (Serotype H – 14) Formulations Against Mosquito Larvae in Central Iowa. J. Amer. Control Assoc. 44:502-505.

Covell, C.V., Jr.,and V.H. Resh . 1971 Relative Abundance of *Culex pipiens* and *Culex restuans* in Catch Basins in Jefferson County, Kentucky. Mosq. News 31: 73-76

Mack, T.M., B.F. Brown, W.D. Sudia, J.C. Todd, H. Maxfield, and P.H. Coleman 1967. Investigation of and Epidemic of St. Louis Encephalitis in Danville, Kentucky, 1964. J. Med, Entomol. 4:70-75

Owens, J.M. 1986. Urban Pest Management: Concept and Context. In Advances in Urban Pest Management, G.W. Bennett and J.M. Owens (eds.). Van Nostrand Reinhold Co., New York, pp. 1-12.

Suman DS, Healy SP, Farajollahi A, Crans SS, Gaugler R. 2012. Efficacy of DUET™ dual-action adulticides against caged *Aedes albopictus* with the use of an ultra-low-volume cold aerosol sprayer. Journal of the American Mosquito Control Association. 28(4): 338-340.

2022-2024 Proposal

Clarke Environmental Mosquito Management, Inc., Professional Services Outline for The 2022-2024 Village of Downers Grove Environmental Mosquito Management (EMM) Program

Part I. General Service

A. Aerial Survey and Geographic Information System (GIS) Mapping
B. Computer System and Record Keeping Database
C. Public Relations and Educational Brochures
D. Mosquito Hotline Citizen Response – (800) 942-2555
E. Comprehensive Insurance Coverage naming the Village of Downers Grove additionally insured
F. Program Consulting and Quality Control Staff
G. Monthly Operational Reports, Periodic Advisories, and Annual Report
H. Regulatory compliance on local, state, and federal levels

Part II. Surveillance and Monitoring

A. Floodwater Mosquito Migration Model:
The use of weather data and computer model to predict the arrival of *Aedes vexans* brood (hatch) and peak annoyance periods. (Clarke will contact the Village of Downers Grove representative and inform her/him of the impending brood arrival.)
B. Weather Monitoring – Operational Forecasts
C. Arbovirus Surveillance:
Clarke New Jersey Light Trap Network to monitor and evaluate adult mosquito activity.

Part III. Larval Control

1. Catch Basins: One treatment of up to 5,320 street side catch basins, inlets and manholes using Natular® XRT sustained release insecticide for control of up to 180 days will be performed via bicycle.
2. Catch Basins: One treatment of up to 400 street side catch basins, inlets and manholes using Natular® T30 sustained release insecticide for control of up to 30 days will be performed via bicycle.

Part IV. Adult Control

A. Adulticiding in Residential Areas:
As authorized, community-wide truck ULV treatments of up to 167 miles of streets will be performed using Duet®.
B. Adulticiding Operational Procedures
1. Notification of community contact.
2. Weather limit monitoring and compliance.
3. Notification of residents on Clarke Call Notification List.
4. ULV particle size evaluation.
5. Insecticide dosage and quality control analysis.

AVL AND GPS TECHNOLOGY

ADULT MOSQUITO CONTROL

Clarke utilizes a fleet of 47 state of the art truck mounted ULV sprayers in the Chicago area. Each Clarke truck is outfitted with SmartFlow II (SMII) variable control and, GEOTAB. SMII allows the adult mosquito control equipment (the sprayer) to vary its chemical output based on the speed of the vehicle providing the correct amount of insecticide per acre at any speed below 24MPH. GPS allows Clarke to verify location and speed throughout the application allowing accurate application rates and effective treatments with real-time vehicle tracking.

GEOTAB, a fleet management system, is installed in every Clarke truck. This system allows managers to monitor driver behavior for improving overall safety and cutting fuel consumption.

LARVAL CONTROL

Open street catch basins, inlets, and manholes will be treated with **Natular® XRTs**, which provide 180 days of control. Bicycle teams, all using GPS, are utilized to ensure proper placement into each catch basin. Integrating Natular XRT treatments via bikes provides a sustainable product and application method for mosquito control while lowering the Village's carbon footprint.

ACCOUNT NAME:

OCEAN SIDE

ACCOUNT NUMBER:

0860

CB SECTION 1

August 29, 2018

● CATCH BASINS (101)

clarke

Treatment Protocol for Rusty Patched Bumble Bee for Village of Downers Grove

Clarke consults with the Illinois DNR when mosquito adulticide service areas overlap or appear to overlap with demarcated Rusty Patched Bumble Bee zones; we also provide the IDNR product information and treatment protocols.

The IDNR has reviewed the ULV protocols and concluded the following:
*The Department has determined adverse impacts within the treatment area are unlikely for state-listed species and natural areas, including the **rusty-patched bumblebee (Bombus affinis**), given the following recommendations are implemented:*

- *No treatments are to be conducted within Illinois Nature Preserves properties and a 300-foot buffer should be maintained around all Nature Preserve properties;*
- *All treatments employ Ultra-Low Volume (ULV) methodology;*
- *Treatments only occur at night, and only in response to threshold disease or vector levels;*
- *And the applicant strictly adheres to the EPA label restrictions when applying*

Our treatment thresholds are based on local disease levels and mosquito population densities, which have been established to help prevent the amplification of arbovirus in the vector and host populations (see Operational Plan).

Clarke will only perform ULV adult mosquito control in Rusty Patched Bumble Bee zones during the following time range: treatments will begin no earlier than 2 hours after sunset; treatments will end no later than 2 hours before sunrise.

ULV adult mosquito control applications will be performed using sumithrin-based products, based on research related to honey bee toxicity.

Treatment Protocol for Pollinator Gardens and Residential Beehives for Village of Downers Grove

Clarke will work with the Village of Downers Grove and residents to collect locations where beehives are being kept. Upon request, all residents (and residents with beehives) will be put on Clarke's spray notification list and will receive a phone call on the day that the Village's scheduled adult mosquito control application will take place. Clarke will also honor any 'no spray' requests made by the Village and/or residents, should keepers prefer to have the spray turned off near their property. Notification and shut off requests can be made via our 800 hotline number or our online Customer Portal. We will also cross-check all known beehive locations with those registered on DriftWatch to ensure that any requested notifications are made prior to adult mosquito control applications.

Clarke will map out pollinator gardens, beehives, and other 'shut-off' request areas on our adult mosquito control ULV maps. We will work with the Village to address any questions or further treatment plans based on the Village's needs.

Hotline and Web Based Service Portal

Clarke maintains and operates both a toll-free (800) hotline number and an online Customer Portal that BOTH the Village and residents can used to get up to date information on their mosquito abatement program, register for spray notifications, report standing water, be placed on the no spray list, and get answers to questions that they might have!

The Village and residents can access the following information via our hotline or portal (https://www.clarkeportal.com/hotline) :

- **Sign up for and manage advance treatment notifications via email or text**
- Report standing water and nuisance mosquito activity
- Request services, reschedule appointments and contact our Customer Care team
- Access the details of past treatments and scheduled services (Village only)
- Download reports on completed treatments (Village only)
- View invoices online and contact us with billing questions (Village only)

Coordinated Adult Mosquito Control Application Effort

Our corporate office is based in suburban Chicago. Clarke currently serves over 200 governmental customers in Illinois, including municipalities, townships, counties, mosquito abatement districts, and federal agencies (FEMA).

We provide services to neighboring communities including the City of Darien, Downers Grove Township, and Villages of Westmont, Lisle, Hinsdale, Oak Brook, Lombard, Burr Ridge and Woodridge. Clarke is able to provide individualized services to each program while maintaining a regional approach. Once the spray recommendation is made and approved, community spray efforts among neighboring communities are coordinated to enhance coverage when high nuisance or disease are present.

TAB 2

Village of Downers Grove

Accounts with * are located in Rusty Patched Bumble Bee Areas

MUNICIPAL REFERENCE LIST

Municipality: Bloomindale Township
Address: 123 N Rosedale, Bloomingdale, IL 60108
Telephone # 630-529-7715
Contact Name Michael Hovde Jr, Supervisor
Year(s) of the mosquito abatement contract 35+
Did the contract include both larviciding and adulticiding? (Yes) or No

Municipality Downers Grove Township*
Address: 4340 Prince Street Downers Grove, IL 60515
Telephone # 630-719-6611
Contact Name Paul Coultrap Supervisor
Year(s) of the mosquito abatement contract 35+
Did the contract include both larviciding and adulticiding? (Yes) or No

Municipality: Village of Burr Ridge*
Address: 7660 S County Line Rd, Burr Ridge, IL 60521
Telephone # 630-654-8181
Contact Name David Preissig, Operations Supervisor
Year(s) of the mosquito abatement contract 35+
Did the contract include both larviciding and adulticiding? (Yes) or No

Municipality Village of Hinsdale *
Address: 19 E Chicago Avenue, Hinsdale, IL 60521
Telephone # 630-789-7041
Contact Name George Peluso, Director of Public Services
Year(s) of the mosquito abatement contract 30+
Did the contract include both larviciding and adulticiding? (Yes) or No

Municipality: West Chicago Mosquito Abatement District *
Address: 493 Duane Street Glen Ellyn, IL 60137
Telephone # 630-988-0365 630-815-6651
Contact Name Dona Smith Past President Rosalinda (Ro) Campos
Year(s) of the mosquito abatement contract 25+
Did the contract include both larviciding and adulticiding? (Yes) or No

Municipality Wheaton Mosquito Abatement District *
Address: PO Box 933 Wheaton, IL 60189
Telephone # 630-479-0048
Contact Name Alan Bolds
Year(s) of the mosquito abatement contract 50+
Did the contract include both larviciding and adulticiding? (Yes) or No

TAB 3

V. PROPOSAL/CONTRACT FORM

*****THIS PROPOSAL, WHEN ACCEPTED AND SIGNED BY AN AUTHORIZED SIGNATORY OF THE VILLAGE OF DOWNERS GROVE, SHALL BECOME A CONTRACT BINDING UPON BOTH PARTIES.**

Entire Block Must Be Completed When A Submitted Proposal Is To Be Considered For Award

PROPOSER:

Clarke Environmental Mosquito Management
Company Name

675 Sidwell Ct
Street Address of Company

St. Charles, IL 60174
City, State, Zip

800-323-5727
Business Phone

630-443-3070
Fax

Date: 3/2/2022

eglasberg@clarke.com
Email Address

Emily Glasberg
Contact Name (Print)

847-421-9117
24-Hour Telephone

Signature of Officer, Partner or Sole Proprietor

Julie Reiter- VP of HR and Sustainable Development
Print Name & Title

ATTEST: If a Corporation

Signature of Corporation Secretary

VILLAGE OF DOWNERS GROVE:

Authorized Signature

Title

Date

ATTEST:

Signature of Village Clerk

Date

In compliance with the specifications, the above-signed offers and agrees, if this Proposal is accepted within **90** calendar days from the date of opening, to furnish any or all of the services upon which prices are quoted, at the price set opposite each item, delivered at the designated point within the time specified above.

Village of Downers Grove

VENDOR W-9 REQUEST FORM

The law requires that we maintain accurate taxpayer identification numbers for all individuals and partnerships to whom we make payments, because we are required to report to the I.R.S all payments of $600 or more annually. We also follow the I.R.S. recommendation that this information be maintained for all payees including corporations.

Please complete the following substitute W-9 letter to assist us in meeting our I.R.S. reporting requirements. The information below will be used to determine whether we are required to send you a Form 1099. Please respond as soon as possible, as failure to do so will delay our payments.

BUSINESS (PLEASE PRINT OR TYPE):

NAME: Clarke Environmental Mosquito Management, Inc

ADDRESS: 675 Sidwell Ct

CITY: St. Charles

STATE: IL

ZIP: 60174

PHONE: 800-323-5727 **FAX:** 630-443-3070

TAX ID #(TIN): 36-2391274

(If you are supplying a social security number, please give your full name)

REMIT TO ADDRESS (IF DIFFERENT FROM ABOVE):

NAME: Clarke Environmental Mosquito Management

ADDRESS: 16300 Collections Center Drive

CITY: Chicago

STATE: IL **ZIP:** 60693

TYPE OF ENTITY (CIRCLE ONE):

Individual	Limited Liability Company – Member-Managed
Sole Proprietor	Limited Liability Company- Manager-Managed
Partnership	Medical
Corporation	Charitable/Nonprofit
Government Agency	

SIGNATURE: _____ **DATE:** 3/2/2022

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

▶ **Go to *www.irs.gov/FormW9* for instructions and the latest information.**

Give Form to the requester. Do not send to the IRS.

Print or type. **See Specific Instructions on page 3.**

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
Clarke Environmental Mosquito Management, Inc.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only **one** of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☑ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is **not** disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

(Applies to accounts maintained outside the U.S.)

5 Address (number, street, and apt. or suite no.) See instructions.
675 Sidwell Court

Requester's name and address (optional)

6 City, state, and ZIP code
St. Charles, IL 60174

7 List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number
[ ][ ][ ] - [ ][ ] - [ ][ ][ ][ ]

or

Employer identification number
3 6 - 2 3 9 1 2 7 4

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here **Signature of U.S. person** ▶ Carrie Ritter **Date** ▶ 2022

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, *later.*

PROPOSER'S CERTIFICATION *(page 1 of 3)*

With regard to Mosquito Abatement Services (Name of Project), Proposer Clarke Environmental Mosquito Management (Name of Proposer) hereby certifies the following:

1. Proposer is not barred from bidding this contract as a result of violations of Section 720 ILCS 5/33E-3 (Bid Rigging) or 720 ILCS 5/33E-4 (Bid-Rotating);

2. Proposer certifies that it has a written sexual harassment policy in place and is in full compliance with 775 ILCS 5/2-105(A)(4);

3. Proposer certifies that it is in full compliance with the Federal Highway Administrative Rules on Controlled Substances and Alcohol Use and Testing, 49 C. F.R. Parts 40 and 382 and that all employee drivers are currently participating in a drug and alcohol testing program pursuant to the Rules.

4. Proposer further certifies that it is not delinquent in the payment of any tax administered by the Department of Revenue, or that Proposer is contesting its liability for the tax delinquency or the amount of a tax delinquency in accordance with the procedures established by the appropriate Revenue Act. Proposer further certifies that if it owes any tax payment(s) to the Department of Revenue, Proposer has entered into an agreement with the Department of Revenue for the payment of all such taxes that are due, and Proposer is in compliance with the agreement.

BY: _____
Proposer's Authorized Agent

3	6	-	2	3	9	1	2	7	4

FEDERAL TAXPAYER IDENTIFICATION NUMBER

or _____
Social Security Number

Subscribed and sworn to before me
this 2ND day of March, 20 22

Mariann Cumbo
Notary Public

OFFICIAL SEAL
MARIANN CUMBO
NOTARY PUBLIC - STATE OF ILLINOIS
MY COMMISSION EXPIRES:04/03/22

PROPOSER'S CERTIFICATION *(page 2 of 3)*

(Fill Out Applicable Paragraph Below)

(a) **Corporation**
The Proposer is a corporation organized and existing under the laws of the State of Illinois, which operates under the Legal name of Clarke Environmental Mosquito Management, Inc, and the full names of its Officers are as follows:

President: J. Lyell Clarke, III

Secretary: Andrew Tecson

Treasurer: Steven Rizzi
and it does have a corporate seal. (In the event that this Proposal is executed by other than the President, attach hereto a certified copy of that section of Corporate By-Laws or other authorization by the Corporation which permits the person to execute the offer for the corporation.)

(b) **Limited Liability Company (LLC)**
The Bidder is a LLC organized and existing under the laws of the State of _____, which operates under the legal name of _____, and the full names of its managers or members are as follows:

Manager or Member: _____

Manager or Member: _____

Manager or Member: _____

Manager or Member: _____

(c) **Partnership**
Signatures and Addresses of All Members of Partnership:

_____

_____

_____

_____

PROPOSER'S CERTIFICATION *(page 3 of 3)*

The partnership does business under the legal name of: _____

which name is registered with the office of _____ in the state of _____.

(d) **Sole Proprietor**

The Proposer is a Sole Proprietor whose full name is: _____

and if operating under a trade name, said trade name is: _____

which name is registered with the office of _____ in the state of _____.

5. Are you willing to comply with the Village's preceding insurance requirements within 13 days of the award of the contract? YES NO (circle one)

Insurer's Name HUB International Midwest Limited

Agent HUB International Midwest Limited

Street Address 55 East Jackson Boulevard

City, State, Zip Code Chicago, IL 60604

Telephone Number 312-922-5000

I/We affirm that the above certifications are true and accurate and that I/we have read and understand them.

Print Name of Company: Clarke Environmental Mosquito Management

Print Name and Title of Authorizing Signature: Julie Reiter- VP of HR and Sustainable Development

Signature: _____

Date: 3/2/2022

Suspension or Debarment Certificate

Non-Federal entities are prohibited from contracting with or making sub-awards under covered transactions to parties that are suspended or debarred or whose principals are suspended or debarred. Covered transactions include procurement for goods or services equal to or in excess of $100,000.00. Contractors receiving individual awards for $100,000.00 or more and all sub-recipients must certify that the organization and its principals are not suspended or debarred.

By submitting this offer and signing this certificate, the Proposer certifies to the best of its knowledge and belief, that the company and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from covered transactions by any federal, state or local governmental entity, department or agency;

2. Have not within a three-year period preceding this Proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction, or convicted of or had a civil judgment against them for a violation of Federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and

4. Have not within a three-year period preceding this application/proposal/contract had one or more public transactions (Federal, State or local) terminated for cause or default.

If the Proposer is unable to certify to any of the statements in this certification, Proposer shall attach an explanation to this certification.

Company Name: Clarke Environmental Mosquito Management

Address: 675 Sidwell Ct

City: St. Charles Zip Code: 60174

Telephone: (800) 323-5727 Fax Number: (630) 443-3070

E-mail Address: eglasberg@clarke.com

Authorized Company Signature:

Print Signature Name: Julie Reiter Title of Official: VP of HR and Sustainable Develeopment

Date: 3/2/2022

Village of Downers Grove

CAMPAIGN DISCLOSURE CERTIFICATE

Any contractor, proposer, bidder or vendor who responds by submitting a bid or proposal to the Village of Downers Grove shall be required to submit with its submission, an executed Campaign Disclosure Certificate.

The Campaign Disclosure Certificate is required pursuant to the Village of Downers Grove Council Policy on Ethical Standards and is applicable to those campaign contributions made to any member of the Village Council.

Said Campaign Disclosure Certificate requires any individual or entity bidding to disclose campaign contributions, as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4), made to current members of the Village Council within the five (5) year period preceding the date of the bid or proposal release.

By signing the bid or proposal documents, contractor/proposer/bidder/vendor agrees to refrain from making any campaign contributions as defined in Section 9-1.4 of the Election Code (10 ILCS 5/9-1.4) to any Village Council member and any challengers seeking to serve as a member of the Downers Grove Village Council.

Under penalty of perjury, I declare:

☒ Bidder/vendor has not contributed to any elected Village position within the last five (5) years.

_____ Julie Reiter
Signature Print Name

☐ Bidder/vendor has contributed a campaign contribution to a current member of the Village Council within the last five (5) years.

Print the following information:

Name of Contributor: _____
(company or individual)

To whom contribution was made: _____

Year contribution made: _____ Amount: $ _____

_____ _____
Signature Print Name

TAB 4

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 2/28/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER HUB International Midwest Limited 55 East Jackson Boulevard Chicago IL 60604	CONTACT NAME: CSU Chicago - Midwest PHONE (A/C, No, Ext): 312-922-5000 FAX (A/C, No): E-MAIL ADDRESS: CSUChicago@hubinternational.com
INSURED Clarke Mosquito Control Products, Inc. Clarke Environmental Mosquito Management, Inc. 159 N. Garden Ave. Roselle IL 60172	INSURER(S) AFFORDING COVERAGE / NAIC # INSURER A : National Union Fire Insurance Company of Pittsburg 19445 INSURER B : Navigators Specialty Insurance Company 36056 INSURER C : Navigators Insurance Company 42307 INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 168606885 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X COMMERCIAL GENERAL LIABILITY			CH22NP3Z03944IC	3/1/2022	3/1/2023	EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300,000
	X Pollution Legal						MED EXP (Any one person)	$ 25,000
	Liability						PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	X POLICY [X] PRO-JECT [X] LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:						Pollution Legal Liab	$ 1,000,000
C	AUTOMOBILE LIABILITY			FA19NCP02119202	3/1/2022	3/1/2023	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
B	X UMBRELLA LIAB [X] OCCUR			CH22NP3Z03944IC	3/1/2022	3/1/2023	EACH OCCURRENCE	$ 10,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$ 10,000,000
	DED [X] RETENTION $ 0							$
A A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N [N] N/A If yes, describe under DESCRIPTION OF OPERATIONS below			WC012-05-6817 WC012-05-6818	3/1/2022 3/1/2022	3/1/2023 3/1/2023	X PER STATUTE [ ] OTH-ER	
							E.L. EACH ACCIDENT	$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Pollution Legal Liability includes coverage for Third Party On-site, Third Party Off-site, Hostile Fire and Building Equipment, Products Pollution, Contractors Pollution and Transportation Cargo.
THE VILLAGE OF DOWNERS GROVE, ITS OFFICERS, OFFICIALS, EMPLOYEES AND VOLUNTEERS ARE ADDITIONAL INSUREDS AS RESPECTS THE GENERAL LIABILITY AND AUTOMOBILE LIABLITY POLICIES AS RESPECTS THEIR INTEREST IN THE INSURED'S OPERATIONS OF MOSQUITO & AQUATIC WEED CONTROL. WORKER'S COMPENSATION COVERAGE INCLUDES A WAIVER OF SUBROGATION IN FAVOR OF VILLAGE OF DOWNERS GROVE. LIABILITY COVERAGE IS PRIMARY AND NON-CONTRIBUTORY IN FAVOR OF THE ADDITIONAL INSUREDS.

CERTIFICATE HOLDER

VILLAGE OF DOWNERS GROVE
PUBLIC WORKS DEPARTMENT ATTN: KERSTIN VON DER HE
DOWNERS GROVE IL 60515-4074

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

TAB 5

clarke

DUET®

Dual-Action Adulticide

For use only by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

A Quick Knockdown, Oil Soluble Synergized Synthetic Pyrethroid for Effective Control of Adult Mosquitoes, Gnats, Biting and Non-Biting Midges, and Blackflies in Outdoor Residential and Recreational Areas.

ACTIVE INGREDIENTS:	
Prallethrin: (RS)-2-methyl-4-oxo-3-(2-propynyl) cyclopent-2-enyl-(1RS)-cis, trans-chrysanthemate	1.00%
Sumithrin®: 3-Phenoxybenzyl-(1RS, 3RS, 1RS, 3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl) cyclopropanecarboxylate	5.00%
* Piperonyl Butoxide	5.00%
** OTHER INGREDIENTS	89.00%
	100.00%

Contains 0.0717 pounds of Prallethrin/Gallon, 0.359 pounds of Sumithrin®/Gallon and 0.359 pounds of Piperonyl Butoxide (PBO)/Gallon
*(butylcarbityl)(6-propylpiperonyl) ether and related compounds
**Contains petroleum distillate

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente

FIRST AID	
IF SWALLOWED:	• Immediately call a poison control center or doctor. • Do not induce vomiting unless told to do so by a poison control center or a doctor. • Do not give any liquid to the person. • Do not give anything by mouth to an unconscious person.
NOTE TO PHYSICIAN: Contains petroleum distillates - vomiting may cause aspiration pneumonia.	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information regarding medical emergencies or pesticide incidents, call 1-888-740-8712.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE) Mixers, loaders, applicators, and other handlers must wear the following: long-sleeved shirt, long pants, shoes and socks. See engineering controls for additional requirements.

USER SAFETY REQUIREMENTS Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

USER SAFETY RECOMMENDATIONS Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENGINEERING CONTROLS Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial applications is limited to the use of the Global Positioning System (GPS) or mechanical flaggers.

ENVIRONMENTAL HAZARDS

This pesticide is highly toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply to or allow drift onto blooming crops or weeds when bees are foraging in the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS

For use only by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel only.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

Do not treat a site with more than 0.0036 lb. of each a.i., Sumithrin and piperonyl butoxide and 0.00072 lbs. prallethrin per acre in a single application or in any 24-hour period. Do not apply more than 0.0108 lb. each of Sumithrin and piperonyl butoxide and 0.0022 lb. prallethrin to the same treatment area in a 7 day period. Do not apply more than 0.0216 lb. each of Sumithrin and piperonyl butoxide and 0.0043 lb. prallethrin to the same treatment area in 1 month. Do not exceed 0.1 lb. of Sumithrin or piperonyl butoxide or 0.02 lb. prallethrin per acre in any site in one year. More frequent applications may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

NOTE: When rotating products with other insecticides containing piperonyl butoxide, do not exceed 2 lbs. PBO per acre per year.

Not for use in outdoor residential misting systems. Not for use in metered release systems.

DUET cannot be diluted in water. Dilute this product with light mineral oil if dilution is preferred.

USE INFORMATION

DUET is approved for application as a thermal aerosol and as an Ultra Low Volume (ULV) nonthermal aerosol (cold fog) in mosquito adulticiding programs involving outdoor residential, urban, industrial, and recreational areas where adult mosquitoes are present in annoying numbers, and in vegetation surrounding parks, woodlands, swamps, marshes, overgrown areas and golf courses.

DUET may be applied over crops or to areas favoring drift over crops, including row, tree, fruit, citrus, pasture and other areas where agricultural enterprises take place.

SPRAY DROPLET SIZE DETERMINATION

Ground-based, wide area mosquito abatement application: Spray equipment must be adjusted so that the volume median diameter (VMD) is less than 30 microns (Dv 0.5 < 30 um) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 um). Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial Equipment, wide area mosquito abatement application: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 um) and that 90% of the spray is contained in droplets smaller than 115 microns (Dv 0.9 < 115 um). The effects of flight speed and, for non-rotary atomizers, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

GROUND ULV APPLICATION

To control Mosquitoes and other listed insects, apply DUET at a flow rate of 2.6 to 7.8 fluid ounces per minute at an average vehicle speed of 10 mph using a swath width of 300 feet for acreage calculations (see chart below). For best results, apply when mosquitoes are most active and meteorological conditions are conducive to keeping the spray cloud close to the ground. Certain mosquito species such as *Aedes aegypti* and *Aedes albopictus*, are most active during the day. Application in calm air conditions is to be avoided. Apply only when ground wind speed is greater than or equal to 1 mph. All types of applications should be conducted at temperatures above 50 °F. Under normal residential conditions a flow rate of 4.8 fluid ounces per minute at an average vehicle speed of 10 mph is recommended. If a different vehicle speed is used, adjust rate accordingly. These rates are equivalent to 0.00024 to 0.00072 pounds of Prallethrin and 0.0012 to 0.0036 pounds of Sumithrin® and Piperonyl Butoxide per acre. Vary flow rate according to vegetation density and mosquito population. Use higher flow rate

in heavy vegetation or when populations are high. DUET may also be diluted with a suitable solvent such as mineral oil and applied by GROUND ULV equipment so long as 1.28 fluid ounces per acre of DUET is not exceeded. Refer to the dilution tables on this label for flow rate calculations for diluted end-use formulations of DUET. Use the following tables to calculate application rates:

Pounds a.i./Acre			DUET Fl.oz./Acre	Flow Rates in fluid oz./minute at truck speeds of:			
Prallethrin	Sumithrin®	PBO		5 MPH	10 MPH	15 MPH	20 MPH
0.00072	0.0036	0.0036	1.28	3.9	7.8	11.7	15.6
0.00044	0.0022	0.0022	0.79	2.4	4.8	7.1	9.5
0.00036	0.0018	0.0018	0.64	1.9	3.9	5.8	7.8
0.00024	0.0012	0.0012	0.43	1.3	2.6	3.9	5.2

DUET may be applied through truck mounted thermal fogging equipment. Do not exceed the maximum rates listed above. May be applied at speeds of 5 to 20 mph. To reduce oil requirement and sludge buildup in equipment, use a 60-100-second viscosity mineral "fog" oil or other fuel-type oil. Use a clean, well-maintained and properly calibrated fogger. Do not wet foliage since oil base formulations may be phytotoxic.

Urban ULV Mosquito Control: DUET may be applied for control of resting or flying adult mosquitoes in urban and industrial areas such as utility tunnels, pipe chases, underground basements, underground passages, parking decks, open parking garages, abandoned warehouses, crawl spaces, uninhabited buildings, rail yards, waste yards, junkyards, tire dumps, and other areas where adult mosquitoes may be found. Apply using mechanical-foggers, or truck-mounted ULV equipment, or other spray equipment suitable for this application. Apply at rates up to but not exceeding 0.0036 lb of each a.i., Sumithrin and piperonyl butoxide and 0.00072 lbs. prallethrin per acre in a single application or in any 24-hour period.

AERIAL APPLICATION

DUET may be applied at rates of 0.43 to 1.28 fluid ounces of DUET per acre by fixed wing or rotary aircraft equipped with suitable ULV application equipment. Appropriate spray systems include rotary atomizers, flat fan, high pressure, and high pressure impaction nozzles characterized and oriented to achieve the droplet characteristics specified in this label. DUET may also be diluted with a suitable solvent such as mineral oil and applied by aerial ULV equipment so long as 1.28 fluid ounces per acre of DUET is not exceeded. Refer to the dilution tables on this label for flow rate calculations for diluted end-use formulations of DUET. Do not apply by fixed wing aircraft at a height less than 100 feet above the ground or canopy, or by helicopter at a height less than 75 feet above the ground or canopy unless specifically approved by the state or tribe based on public health needs. When making aerial application at an altitude of less than 100 feet, apply only when wind speed at altitude is greater than or equal to 5 mph. When making application at an altitude of 100 feet or greater, apply only when wind speed at altitude is greater than or equal to 3 mph.

DILUTION CALCULATIONS

For a 4% Sumithrin product, dilute 1 gallon DUET with 0.25 gallon oil. Finished spray contains 0.29 lbs Sumithrin & PBO and 0.06 pounds Prallethrin per gallon.

Dosage Description	Pounds a.i./Acre			Fluid oz. Finished spray/Acre	Flow Rates in fluid oz./minute at truck speeds of:			
	Prallethrin	Sumithrin	PBO		5 MPH	10 MPH	15 MPH	20 MPH
High Population	0.00072	0.0036	0.0036	1.61	4.9	9.7	14.6	19.5
Recommended	0.00044	0.0022	0.0022	0.98	3.0	5.9	8.9	11.9
Light Population	0.00036	0.0018	0.0018	0.80	2.4	4.9	7.3	9.7
	0.00024	0.0012	0.0012	0.54	1.6	3.2	4.9	6.5

For a 2.5% Sumithrin product, dilute 1 gallon DUET with 1 gallon oil. Finished spray contains 0.179 lbs Sumithrin & PBO and 0.036 pounds Prallethrin per gallon.

Dosage Description	Pounds a.i./Acre			Fluid oz. Finished spray/Acre	Flow Rates in fluid oz./minute at truck speeds of:			
	Prallethrin	Sumithrin	PBO		5 MPH	10 MPH	15 MPH	20 MPH
High Population	0.00072	0.0036	0.0036	2.57	7.8	15.6	23.4	31.1
Recommended	0.00044	0.0022	0.0022	1.57	4.8	9.5	14.3	19.0
Light Population	0.00036	0.0018	0.0018	1.28	3.9	7.8	11.7	15.6
	0.00024	0.0012	0.0012	0.86	2.6	5.2	7.8	10.4

For a 2% Sumithrin product, dilute 1 gallon DUET with 1.5 gallons oil. Finished spray contains 0.143 lbs Sumithrin & PBO and 0.029 pounds Prallethrin per gallon.

Dosage Description	Pounds a.i./Acre			Fluid oz. Finished spray/Acre	Flow Rates in fluid oz./minute at truck speeds of:			
	Prallethrin	Sumithrin	PBO		5 MPH	10 MPH	15 MPH	20 MPH
High Population	0.00072	0.0036	0.0036	3.21	9.7	19.5	29.2	38.9
Recommended	0.00044	0.0022	0.0022	1.96	5.9	11.9	17.8	23.8
Light Population	0.00036	0.0018	0.0018	1.61	4.9	9.7	14.6	19.5
	0.00024	0.0012	0.0012	1.07	3.2	6.5	9.7	13.0

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in a cool, dry place. Keep container closed.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:

[For 2.5-gallon Jugs]: Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with mineral oil and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

[For refillable drums & totes]: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

FOR MORE INFORMATION CALL 1-800-323-5727

NOTICE: To the extent provided by law, Seller makes no warranty, expressed or implied, concerning the use of this product other than as indicated on the label. Buyer assumes all risk of use and/or handling of this material when use and/or handling is contrary to label instructions.

MANUFACTURED FOR:
CLARKE MOSQUITO CONTROL PRODUCTS, INC.
159 N. GARDEN AVENUE
ROSELLE, ILLINOIS 60172

AVAILABLE PACKAGING: 2.5 GAL, 30 GAL, 55 GAL, 275 GAL TOTE

LOT NO.: Marked on Container Label

EPA REG. NO.: 1021-1795-8329

EPA EST. NO.: _____

AL0477

SAFETY DATA SHEET

DUET® Dual-Action Adulticide

Effective Date: 15 November 2021
v.03

SECTION 1. Identification of the Substance/Mixture and of the Company

Product Identifier

Formulation Identifier: DUET® Dual-Action Adulticide

EPA Registration Number: 1021-1795-8329

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant identified uses: An insecticide for mosquito and vector control
Uses advised against: See product label for use restrictions

Details of the Supplier

Clarke Mosquito Control Products, Inc.
675 Sidwell Court
St. Charles, IL 60174 U.S.A.
+1 (630) 894-2000
Email: Clarke@clarke.com

Emergency Telephone Number

24 Hour MEDICAL Emergency: SafetyCall®: (888) 740-8712 or (952) 852-9509
24 Hour TRANSPORTATION Emergency: CHEMTREC®: (800)-424-9300
International: (703) 527-3887

SECTION 2. Hazards identification

United States (US)
According to OSHA 29 CFR 1910.1200 HCS

Classification of the Substance or Mixture

Acute Toxicity (Inhalation): Category 4

Aspiration Toxicity: Category 1

Pictogram:

Signal Word: DANGER

Hazard Statements: Harmful if inhaled.
May be fatal if swallowed and enters airways.

Precautionary Statements:

PREVENTION: Avoid breathing mist/vapors/spray. Use only outdoors or in well-ventilated area.

RESPONSE: IF INHALED- Remove victim to fresh air and keep at rest in a position for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

IF SWALLOWED: Immediately call a poison center/doctor. Do NOT induce vomiting.

STORAGE: Store locked up in a well ventilated place. Keep container tightly closed.

DISPOSAL: Dispose of contents/container to an approved waste disposal plant.

Other Hazards Not Classifiable Under OSHA 2012 HCS - Not applicable

Comments: This material is considered hazardous by the 2012 OSHA Hazard Communication Standard [29 CFR 1910.1200(a)(1), and the GHS

SECTION 3. Composition/Information on Ingredients

Components

Substance Name	CAS No.	Concentration % w/w
ETOC® (Prallethrin)	23031-36-9	1.0
SUMITHRIN® (d-Phenothrin)	26002-80-2	5.0
Piperonyl Butoxide	51-03-6	5.0
Petroleum Distillates, hydrotreated light	64742-47-8	20-30 *
White Mineral Oil	8042-47-5	50-75 *

* The exact percentage (concentration) of composition has been withheld as trade secret.
Ingredients not identified are non-hazardous and/or are not required to be disclosed pursuant to 29 CFR 1910.1200 (2012), and are withheld as trade secret.

SECTION 4. First Aid Measures

Description of First Aid Measures

Eye contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes then continue rinsing. Call a poison control center/doctor for treatment advice.

Skin Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Ingestion: If swallowed, IMMEDIATELY call a poison control center or doctor for treatment advice. DO NOT give **any** liquid to the person. Do not induce vomiting unless told to do so by a poison control center or doctor. Never give anything by mouth to an unconscious person.

Inhalation: Remove affected person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Indication of Immediate Medical Attention and Special Treatment

Notes to Physician: Contains Pyrethoids and Petroleum Distillates – vomiting may pose an aspiration hazard. For skin effects, a highly efficient therapeutic agent for Pyrethrin/Pyrethroid exposure is topical application of Tocopherol Acetate (Vitamin E).

SECTION 5. Fire-Fighting Measures

Extinguishing Media

Suitable Extinguishing Media: Water Fog, Carbon Dioxide (CO_2), Dry Chemical, foam

Unsuitable Extinguishing Media: Do not use water jet.

Special Hazards Arising From the Substance or Mixture

Specific Hazards: No information available.

Explosion data:
Sensitivity to Mechanical Impact: None
Sensitivity to static discharge: Yes, use proper bonding and/or grounding procedures.

Special Protective Equipment and Precautions for Fire-Fighters

Protection against fire: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Special Procedures: Treat as oil fire. Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents

appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

SECTION 6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Use appropriate protection (see section 8). Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment as required.

Environmental Precautions: Prevent product from entering into drains and waterways. Collect and dispose of this material and its container in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities.

Methods and Material for Containment and Cleaning Up

Methods for containment: Prevent further leakage of spillage if safe to do so. Move containers from spill area.

Small spill: Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

Large Spill: Prevent entry into sewers, water courses, basements or confined areas. Dam up and soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

SECTION 7. Handling and Storage

Precautions for Safe Handling

Protective measures: Wear a long-sleeved shirt, long pants, shoes and socks. Take prudent precautions to avoid contact with skin, eyes, and clothing. Mechanical ventilation should be used when handling this product in enclosed spaces. Do not contaminate water, food or feedstuffs, by storage, handling, or by disposal.

Hygiene Measures: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a cool, dry place. Keep container closed. Always store pesticides in the original container. Store away from food and pet food. Keep out of reach of children.

Electrostatic Accumulation Hazard: This product contains petroleum distillates for which there is potential for the accumulation of static electricity. Consideration should be given to bonding and grounding of equipment during loading, unloading, and transfer of this product.

SECTION 8. Exposure Controls / Personal Protection

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

Control Parameters

Component Name	CAS No.	List	Type	Value
ETOC® (Prallethrin)	23031-36-9	OSHA; ACGIH		None
SUMITHRIN® (d-Phenothrin)	026002-80	OSHA; ACGIH		None
Piperonyl Butoxide	51-03-6	OSHA; ACGIH		None
Petroleum Distilates	64742-47-8	OSHA & ACGIH	TLV/TWA (as oil-mist, if generated)	5 mg/m³

Mineral Oil	8042-47-5	OSHA & ACGIH	PEL / TLV, TWA (oil mist, mineral)	5 mg/m³

Exposure controls

Engineering Controls: Use with adequate ventilation. Local exhaust ventilation may be necessary for some operations..

Individual Protection Measures, such as Personal Protection Equipment:

Eye Protection: Safety Glasses, Goggles or Face Shield. Take prudent precautions to avoid contact with eyes.

Skin Protection: Wear a long-sleeved shirt and long pants, shoes and socks.

Hand Protection: It is good industrial hygiene practice to minimize skin contact. If required or preferred, use suitable protective chemical resistant gloves such as latex, nitrile, or neoprene.

Respiratory Protection: None required. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn.

SECTION 9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Appearance:	Clear, yellow-colored liquid
Color:	1.0 on Gardner Scale
Odor:	Solvent odor
Odor Threshold:	No information available
pH:	Not applicable. Product is not miscible in water
Melting Point:	No information available
Freezing Point:	No information available
Initial Boiling Point:	No information available
Flash Point:	>93.3°C (>200°F) (Tag Closed Cup)
Evaporation Rate:	No information available
Flammability:	No information available
Explosion limits [U/L]:	No information available
Vapor Pressure:	No information available
Vapor Density (Air =1):	Heavier than air
Relative Density:	No information available
Specific Gravity (Water = 1)	0.860 @ 20°C (68°F)
Solubility:	Immiscible
Partition Coefficient:	No information available
Auto-Ignition Temperature:	No information available
Viscosity:	18 cPs @ 22.0°C (71.6°F) Brookfield
Decomposition Temperature:	No information available
Explosive Properties:	No information available
Oxidizing Properties:	No information available
VOC Content (%):	<1.000%

SECTION 10. Stability and Reactivity

Reactivity
No data available

Chemical Stability

Stable under recommended normal storage conditions

Possibility of Hazardous Reactions

Hazardous Reactions:	None under normal conditions
Hazardous Polymerization:	Hazardous polymerization does not occur

Conditions to avoid Extremes of temperature and direct sunlight

Incompatible materials Not compatible with strong acids and bases. Not compatible with oxidizing agents.

Hazardous decomposition products
Carbon monoxide (CO), Carbon dioxide (CO_2)

SECTION 11. Toxicological information

Information on Likely Routes of Exposure

Routes of entry: Oral, Dermal, Inhalation
May be fatal if swallowed and enters airways due to petroleum distillate. Vomiting may cause aspiration pneumonia.

Information on Toxicological Effects

Acute Toxicity / Effects

Assessment of acute toxicity: Slightly toxic after ingestion. Relatively non-toxic after short-term inhalation. Moderately toxic after short term skin contact. Some or all of the toxicity data reported is bridged from a substantially similar formula.

Oral, (Rat) LD_{50}	>5,000 mg/kg
Dermal, (Rabbit) LD_{50}	>2,000 mg/kg
Inhalation, Rat LC_{50}	>2.04 mg/l (4 hours)
Skin Corrosion/Irritation:	Slight irritation at 72 hours. Irritation Index = 0.92
Serious Eye Damage/Irritation:	Irritation clearing in 24 hours.
Skin Sensitization:	Negative; Not considered to be a dermal sensitizer (Buehler).
Conditions aggravated by exposure:	None known

Chronic Toxicity / Effects

Assessment of repeated dose toxicity: No significant signs or symptoms indicative of any adverse health effects are expected to occur.

Germ Cell Mutagenicity	This product has not been tested. The statement has been derived from the properties of the individual components. No data is available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not carcinogenic. This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures to PBO. The significance of these observations is undetermined and under review. The doses at which tumors were observed for PBO greatly exceeded potential exposure from labeled uses.
Reproductive Effects:	This product has not been tested. The statement has been derived from the properties of the individual components. No data is available to indicate product or any components present at greater than 0.1% produce a fertility impairing effect. No indication of a developmental toxic / teratogenic effect.
STOT – Single exposure	Not classified
STOT – Repeated exposure	Not classified

SECTION 12. Ecological Information

Ecotoxicity:

Product specific data is not available. Data referenced is in relation to active ingredients, d-Phenothrin and PBO

Toxicity to Fish:	d-Phenothrin 96-hr Acute LC_{50} 16.7 µg/L (rainbow trout), 15.8 µg/L (bluegill sunfish) PBO: 96-hour Acute LC_{50} 6/12 ppm (rainbow trout) Prallethrin LC50 0.012 mg/L (rainbow trout)
Toxicity to Aquatic Invertebrates:	d-Phenothrin 48-hr LC_{50} 4.4 µg/L *Daphnia magna* d-Phenothrin 48-hr LC_{50} 0.025 µg/L *Mysidopsis bahia* PBO: 96-hr LC_{50} 0.49 ppm, *Americamysis bahia* Prallethrin 48-hr EC_{50} 0.0062 mg/L *Daphnia*
Toxicity to Plants:	No data available

Persistence and Degradability

Product specific data not available. Data referenced is in relation to the active ingredients, d-Phenothrin and PBO

Biodegradability:	Not readily biodegradable (by OECD criteria)
Bioconcentration Factor:	d-Phenothrin: 592 (edible), 4,000 (non-edible) PBO: 2, 175 Prallethrin: no data available
Log Kow:	d-Phenothrin: 6 PBO: 4.95 Prallethrin: 4.49
Depuration:	d-Phenothrin, PBO: 2-4 days
Mobility in Soil:	d-Phenothrin has low water solubility and binds tightly to soil. Based on these properties, d-phenothrin is relatively immobile in soil and its potential to contaminate groundwater is low. PBO is not very soluble in water and adheres moderately to soil with organic matter. Prallethrin is not very water soluble and adheres moderately with organic material. The hazard for prallethrin to move off the site of application with rain or irrigation is rated moderate.

SECTION 13. Disposal Considerations

Waste Treatment and Disposal methods

Pesticide wastes are regulated. Consult product label for chemical substance and container disposal instructions. Avoid release to the environment. Improper disposal of excess product or rinsate is a violation of Federal law. If these wastes cannot be disposed or by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA regional office for guidance.

Container disposal: Rinse thoroughly in accordance with label instructions.

SECTION 14. Transport Information

DOT (US)
Proper Shipping Name: Agricultural Insecticide. N.O.I. Non-Hazardous
Primary Hazard Class/Division: Non-Hazardous

In Non-Bulk quantities (i.e., less than or equal to 119 Gallons / 450 Liters): This material is not regulated by the DOT as a hazardous material.

In Bulk Quantities (more than 119 Gallons / 450 Liters):
UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (d-PHENOTHRIN)
Hazard Class: 9
Packing Group: III
Marine Pollutant: Yes

IMDG (Vessel)

UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (d-PHENOTHRIN)
Hazard Class: 9
Packing Group: III
Marine Pollutant: Yes

ICAO/IATA (Air transport)
UN Number: UN3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (d-PHENOTHRIN)
Hazard Class: 9
Packing Group: III
Marine Pollutant: Yes

SECTION 15. Regulatory Information

FIFRA Information: This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal word: CAUTION
KEEP OUT OF REACH OF CHILDEN

PRECAUTIONARY STATEMENTS: HAZARDS TO HUMANS AND DOMESTIC ANIMALS: CAUTION. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE): Mixers, loaders, applicators, and other handlers must wear the following: long-sleeve shirt, long pants, shoes and socks. See engineering controls for additional requirements.

User safety requirements: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

User Safety Recommendations: Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside, then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

Engineering controls: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial applications is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

FIRST AID

If swallowed:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or a doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.
Note to physician:	Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information regarding medical emergencies or pesticide incidents call 1-888-740-8712.

Other Federal Regulations

SARA TITLE III CLASSIFICATION

Section 302:	None
Section 311/312:	Immediate (acute) health hazard
Section 313:	This product contains the following chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

CAS Number	Chemical Name	% by wt.

26002-80-2	d-phenothrin	5.0
51-03-6	piperonyl butoxide	5.0

CERCLA RQ: None

U.S. California Proposition 65: Not listed

STATE RIGHT-TO-KNOW: National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16. Other Information

DISCLAIMER OF LIABILITY: The information in this SDS was obtained from sources we believe to be reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared as is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

NFPA Health Hazards 2
Flammability 1
Instability 0
Physical and Chemical Properties –

HMIS Health Hazards 1
Flammability 1
Physical Hazards 0
Personal Protection X

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® Sumithrin is a Registered Trademark of Sumitomo Company Ltd.
® ETOC is a Registered Trademark of Sumitomo Company Ltd.

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NATULAR® T30

Mosquito Larvicide / 30-Day Tablet

Controls larvae of mosquitoes which may carry Dengue, Chikungunya, or Zika.

To be used in governmental mosquito control programs, by professional pest control operators, or in other mosquito or midge control operations.

Active Ingredient:	
Spinosad (a mixture of spinosyn A and spinosyn D)	8.33%
Other ingredients:	91.67%
Total	100.00%

U.S. Patent No. 5,362,634 and 5,496,931

Natular T30 is an 8.33% tablet. This product may absorb moisture; therefore, the weight of the tablet and percent by weight of active ingredient will vary with hydration.

Group	5	INSECTICIDE

Keep Out Of Reach Of Children

CAUTION

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Harmful if swallowed. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Avoid contact with eyes or clothing. Wear protective eyewear (such as goggles, face shield, or safety glasses).

First Aid	
If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
If in eyes:	• Hold eye open and rinse slowly and gently with warm water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-214-7753 for emergency medical treatment information.	

Environmental Hazards

This product is toxic to aquatic organisms. Non-target aquatic invertebrates may be killed in waters where this pesticide is used. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

Product Information

Natular T30 is a product for killing mosquito and midge larvae. This product's active ingredient, spinosad, is biologically derived from the fermentation of Saccharopolyspora spinosa, a naturally occurring soil organism. Natular T30 releases effective levels of spinosad for up to 30 days under typical environmental conditions.

Release of spinosad is affected by the dissolution of the Natular T30 tablet. If tablets become covered by obstructions such as debris, vegetation, or loose sediment as a result of high rainfall or flow, normal dispersion of the active ingredient can be inhibited. Water flow may increase the dissolution of the tablet, thus reducing the residual life of the tablet. Inspect areas of water flow to determine appropriate retreatment intervals. To assure positive results, place Natular T30 tablets where they will not be swept away by flushing action.

Use Precautions

Integrated Pest Management (IPM) Programs

Natular T30 is intended to kill mosquito and midge larvae. Mosquitoes are best controlled when an IPM program is followed. Larval control efforts should be managed through habitat mapping, active adult and larval surveillance, and integrated with other control strategies such as source reduction, public education programs, harborage or barrier adult mosquito control applications, and targeted adulticide applications.

Insecticide Resistance Management (IRM)

Natular T30 contains a Group 5 insecticide.

Insect biotypes with acquired resistance to Group 5 insecticides may eventually dominate the insect population if appropriate resistance management strategies are not followed. Currently, only spinetoram and spinosad active ingredients are classified as Group 5 insecticides. Resistance to other insecticide groups is not likely to impact the effectiveness of this product. Spinosad may be used in rotation with all other labeled products in a comprehensive IRM program.

To minimize the potential for resistance development, the following practices are recommended:

- Base insecticide use on comprehensive IPM and IRM programs
- Do not use less than the labeled rates.
- Routinely evaluate applications for loss of effectiveness.
- Rotate with other labeled effective mosquito larvicides that have a different mode of action.
- In dormant rice fields, standing water within agricultural/crop sites, and permanent marine and freshwater sites, do not make more than 5 applications per year.
- Use insecticides with a different mode of action (different insecticide group) on adult mosquitoes so that both larvae and adults are not

exposed to products with the same mode of action.
- Contact your local extension specialist, technical advisor, and/or Clarke representative for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, you may contact your local Clarke representative by calling 800-323-5727.

Application

Proper application techniques help ensure adequate coverage and correct dosage necessary to obtain optimum kill of mosquito and midge larvae. Natular T30 tablets provide up to 30 days of residual kill. Natular T30 can be applied prior to flooding, on snow and ice in breeding sites prior to spring thaw, or at anytime after flooding in listed sites. Continue treating through the last brood of the season. Natular T30 tablets will be unaffected in dry down situations and will begin working again during subsequent wetting events until the tablet is exhausted. Note: Natular T30 has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

Application Sites and Rates

Natular T30 tablets are designed to kill mosquitoes in small bodies of water. Do not apply to water intended for irrigation. Examples of application sites are:

Storm water drainage areas, sewers and catch basins, woodland pools, snow pools, roadside ditches, retention ponds, freshwater dredge spoils, tire tracks, rock holes, pot holes and similar areas subject to holding water.

Natural and manmade aquatic sites, fish ponds, ornamental ponds and fountains, other artificial water-holding containers, flooded crypts, transformer vaults, abandoned swimming pools, construction and other natural or manmade depressions.

Stream eddies, creek edges, detention ponds.

Freshwater swamps and marshes including mixed hardwood swamps, cattail marsh, common reed wetland, water hyacinth ponds, and similar freshwater areas with emergent vegetation.

Brackish water swamps and marshes, intertidal areas.

Sewage effluent, sewers, sewage lagoons, cesspools, oxidation ponds, septic ditches and tanks, animal waste lagoons and settling ponds, livestock runoff lagoons, wastewater impoundments associated with fruit and vegetable processing and similar areas.

Also for use in dormant rice fields (for application only during the interval between harvest and preparation of the field for the next cropping cycle) and in standing water where mosquito breeding occurs within agricultural areas: pastures/hay fields, rangeland, orchards, vineyards, and citrus groves. Do not apply to waters intended for irrigation.

For mosquito kill in non- or low-flow, shallow depressions (up to 2 feet in depth) treat on the basis of surface area placing 1 Natular T30 tablet per 100 sq ft.

Natular T30 Application Chart

Number of Tablets per 100 sq. ft.	Water Depth (ft)
1	0 - 2
2	2 - 4
3	4 - 6
4	6 - 8

For applications in storm water drainage areas, sewers and catch basins, place Natular T30 tablet into each catch basin.

For application sites connected by a water system, i.e., storm drains or catch basins, treat all of the water holding sites in the system to maximize the efficiency of the treatment program.

For application to small contained sites which may not be amenable to a rate of a single tablet per 100 sq ft, use 1 tablet per contained site (e.g., cesspools and septic tanks, transformer vaults, abandoned pools, and other small artificial water-holding containers).

Restriction: Do not apply to natural or artificial containers of water intended for consumption by people, animals, or livestock.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

Pesticide Storage: Store in a cool dry place in original container only.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling:

For Refillable Container: Refillable container. Refill this container with spinosad pesticide formulation only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

For Nonrefillable Container: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

WARRANTY: To the extent consistent with applicable law Clarke Mosquito Control Products, Inc. makes no warranty, express or implied, concerning the use of this product other than as indicated on the label. Buyer assumes all risk of use/handling of this material when use and/or handling is contrary to label instructions.

Manufactured For:
Clarke Mosquito Control Products, Inc.
159 North Garden Avenue
Roselle, Illinois 60172 U.S.A.
1-800-323-5727

EPA Reg. No.: 8329-85 EPA Est. No.: _____

Net Weight: _____ Lot No.:_____

AL0481

SAFETY DATA SHEET

NATULAR™ T30

Effective Date: 1 June 2015
v.01

SECTION 1. Identification of the Substance/Mixture and of the Company

1.1 Product Identifier

Formulation Identifier: Natular™ T30

EPA Registration Number: 8329-85

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses: Insecticide for control of mosquito and midge larvae

Uses Advised Against: See product label for use restrictions

1.3 Details of the Supplier of the Safety Data Sheet

Clarke Mosquito Control Products, Inc.
675 Sidwell Court
St. Charles, IL 60174 U.S.A.
+1 (630) 894-2000
Email: Clarke@clarke.com

1.4 Emergency Telephone Number

24-Hour Medical Emergency: POISON CONTROL Toll-free (800) 214 – 7753

24-Hour Transportation Emergency: INFOTRAC (800) 535-5053

SECTION 2. Hazards identification

United States (US)
According to OSHA 29 CFR 1910.1200 HCS (2012)

2.2 Classification of the Substance or Mixture

Not Classified

Hazard Symbol(s): None

Signal Word: None

Hazard statements: None

Precautionary Statements: None

2.3 Other Hazards Not Classifiable Under OSHA 2012 HCS

See product label for any additional hazards

SECTION 3. Composition/Information on Ingredients

3.1 Components

Substance Name	CAS No.	Concentration % w/w
Spinosad: Spinosyn A Spinosyn D	 131929-60-7 131929-63-0	8.33

Ingredients not identified are non-hazardous and/or are not required to be disclosed pursuant to 29 CFR 1910.1200 (2012), and are withheld as trade secret.

SECTION 4. First Aid Measures

4.1 Description of First Aid Measures

Eye Contact: Hold eye open and rinse slowly and gently with warm water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes then continue rinsing. Call a poison control center/doctor for treatment advice.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed.

Eye Contact: This product may release nuisance dust in handling or use. Dust may cause slight transient (temporary) eye irritation.

4.3 Indication of Immediate Medical Attention and Special Treatment

Treatment: Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. For medical treatment information, contact the poison control hotline at 1-800-214-7753. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5. Fire-Fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Water Fog, Carbon Dioxide (CO_2), Dry Chemical, Foam

Unsuitable Extinguishing Media: None known

5.2 Special Hazards Arising From the Substance or Mixture

Specific Hazards: Under fire conditions some components may decompose. Combustion products may include CO and NOx.

5.3 Special Protective Equipment and Precautions for Fire-Fighters

Protection Against Fire: Wear positive pressure, self-contained breathing apparatus and protective firefighting clothing (includes fire-fighting helmet, coat, pants, boots, and gloves).

Special Procedures: Fight fires from a protected location. Dike fire control water for later disposal. Keep container cool by spraying with water.

SECTION 6. Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Use appropriate protection (see section 8)

Environmental Precautions: Prevent product from entering into drains and waterways. Collect and dispose of this material and its container in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities. See Section 12 for additional ecological information.

6.2 Methods and Material for Containment and Cleaning Up

Clean Up Methods: Collect all material with shovel, other instrument, or by hand while using appropriate personal protection equipment, and place in closable marked containers.

SECTION 7. Handling and Storage

7.1 Precautions for Safe Handling

Handling: Keep out of reach of children. Do not take internally. Avoid contact with skin and eyes.

Hygiene Measures: Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage: Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilizers. Keep out of reach of children.

SECTION 8. Exposure Controls / Personal Protection

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

8.1 Control Parameters

Component Name	CAS No.	List	Type	Value
Spinosyn A & Spinosyn D	131929-60-7 131929-63-0	DOW IHG	TWA	0.3 mg/m^3

8.2 Exposure controls

Engineering Controls: Use with adequate ventilation. Wash hands thoroughly after handling. Wash clothing before re-using.

Individual Protection Measures, such as Personal Protection Equipment:

Eye Protection: Safety Glasses, Goggles or Face Shield

Skin Protection: Wear suitable protective clothing

Hand Protection: It is good industrial hygiene practice to minimize skin contact. If required or preferred, use suitable protective chemical resistant gloves such as latex, nitrile, or neoprene.

Respiratory Protection: None required

SECTION 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Appearance:	Solid tablet
Color:	Tan/white
Odor:	Earthy scent
Odor Threshold:	Not Available
pH:	Not Determined
Melting Point:	Not Determined
Freezing Point:	Not Applicable
Initial Boiling Point:	Not Applicable
Flash Point:	Not Determined
Evaporation Rate:	Not Applicable
Flammability:	Not Determined
Explosion limits [U/L]:	Not Applicable
Vapor Pressure:	Not Applicable
Vapor Density:	Not Applicable
Relative Density:	1.9075 g/mL
Solubility:	Not Determined
Partition Coefficient:	Not Determined
Auto-Ignition Temperature:	Not Determined
Viscosity:	Not Applicable
Decomposition Temperature:	Not Available
Explosive Properties:	Not Available

Oxidizing Properties: Not Available

SECTION 10. Stability and Reactivity

10.1 Reactivity

Not Available

10.2 Chemical Stability

Stable under normal conditions

10.3 Possibility of Hazardous Reactions

Hazardous Reactions: None under normal conditions

Hazardous Polymerization: Not known to occur

10.4 Conditions to Avoid

Protect from direct sunlight and excessive heat.

10.5 Incompatible Materials

Avoid contact with strong oxidizing agents, strong acids, strong bases

10.6 Hazardous Decomposition Products

None known under normal conditions of storage and use

SECTION 11. Toxicological Information

11.1 Information on Likely Routes of Exposure

Eye Contact: This product may release nuisance dust in handling or use. Dust may cause slight transient (temporary) eye irritation.

11.2 Information on Toxicological Effects

Acute Toxicity/Effects*

*Acute toxicity values are not available for Natular™ T30. Presented values are based on toxicity values of a product of similar composition and form.

Oral, Rat LD_{50}:	> 2,000 mg/kg-bw
Dermal, Rat LD_{50} :	> 4,000 mg/kg-bw
Inhalation, Rat LC_{50} :	> 5.0 g/m^3
Skin Corrosion/Irritation:	Not a skin irritant
Serious Eye Damage/Irritation:	Slight irritant. Natular™ T30 is not classified as an eye irritant according to OSHA 2012 HCS
Skin Sensitization:	Not a skin sensitizer
STOT – Single exposure	No data is available to indicate product or any components present at greater than 0.1% present a specific target organ toxicity hazard from single exposure.
Chronic Toxicity/Effects Germ Cell Mutagenicity	This product has not been tested. No data is available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Spinosad is not mutagenic.
Carcinogenicity:	This product does not contain any carcinogens as listed by OSHA, IARC, or NTP. Spinosad is not carcinogenic.

Reproductive Effects:	No data is available to indicate product or any components present at greater than 0.1% cause reproductive or teratogenic toxicity. For Spinosad: in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
STOT – Repeated Exposure:	In animals, spinosad has been shown to cause vacuolation of cells in various tissues. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

SECTION 12. Ecological Information

12.1 Ecotoxicity

Product specific data is not available. Data referenced is in relation to the active ingredient, Spinosad. Spinosad is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Toxicity to Fish:	96-hr Acute LC_{50} 5.0 mg/L, Common Carp (*Cyprinus carpio*)
	96-hr Acute LC_{50} 5.9 mg/L, Bluegill Sunfish (*Lepomis macrochirus*)
	96-hr Acute LC_{50} 30 mg/L, Rainbow Trout (*Oncorhynchus mykiss*)
Toxicity to Aquatic Invertebrates:	48-hr Acute EC_{50} 1.5-14.0 mg/L, Water Flea (*Daphnia magna*)
	48-hr LC_{50} > 7.9 mg/L, Mysid Shrimp (*Americamysis bahia*)
Toxicity to Aquatic Plants:	5-d EC_{50} 8.1 mg/L, Blue Green Algae (*Anabaena flos-aquae*)

12.1 Persistence and Degradability

Product specific data not available. Data referenced is in relation to the active ingredient, Spinosad.

Log K_{ow}:	Spinosyn A: 3.91; Spinosyn D: 4.38 (distilled water)
Bioaccumulation:	Bioconcentration potential is low (BCF < 100)
Bioconcentration Factor:	Spinosyn A: 19; Spinosyn D: 33 mL/g (fish)
Mobility in Soil:	Potential for mobility in soil is low (K_{oc} between 500 and 2000)
Partition Coefficient, K_{oc}:	701

SECTION 13. Disposal Considerations

13.1 Waste Treatment and Disposal methods

Consult product label for disposal instructions. Avoid release to the environment. Improper disposal of excess product or rinsate is a violation of the Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA regional office for guidance.

SECTION 14. Transport Information

14.1 DOT (US)
Not regulated (Bulk and Non-Bulk Quantities)

14.2 IMDG (Vessel)

UN Number:	3077
Hazard Class:	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S. (Spinosad)
Marine Pollutant:	Yes

14.3 ICAO/IATA (Air transport)

UN Number:	3077
Hazard Class:	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S. (Spinosad)
Environmental Hazard:	Yes

SECTION 15. Regulatory Information

FIFRA Information: This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal Word: CAUTION
Keep Out of Reach of Children

PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic Animals: Harmful if swallowed. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Avoid contact with eyes or clothing. Wear protective eyewear (such as goggles, face shield, or safety glasses).

First Aid	
If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
If in eyes:	• Hold eye open and rinse slowly and gently with warm water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-214-7753 for emergency medical treatment information.	

Other Federal Regulations

SARA TITLE III CLASSIFICATION

Section 302:	None
Section 311/312:	Immediate (acute) hazard
Section 313:	None

CERCLA RQ: None

OSHA HAZARD COMMUNICATION STANDARD: This product is not considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. California Proposition 65: Not listed

STATE RIGHT-TO-KNOW : National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

SECTION 16. Other Information

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources we believe to be reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared as is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

End of document

clarke

NATULAR® XRT

Mosquito Larvicide / Extended Release Tablet

Controls larvae of mosquitoes which may carry Dengue, Chikungunya, and Zika.

To be used in governmental mosquito control programs, by professional pest control operators, or in other mosquito or midge control operations.

Active Ingredient (dry weight basis):	
Spinosad (a mixture of spinosyn A and spinosyn D)	6.25%
Other Ingredients	93.75%
Total	100.00%

U.S. Patent No. 5,362,634 and 5,496,931

Natular XRT is a 6.25% tablet. This product may absorb moisture; therefore, the weight of the tablet and percent by weight of active ingredient will vary with hydration.

SPINOSAD	GROUP	5	INSECTICIDE

KEEP OUT OF REACH OF CHILDREN

For medical treatment information or emergency: Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-214-7753 for emergency medical treatment information.

PRECAUTIONARY STATEMENTS

Environmental Hazards

This product is toxic to aquatic organisms. Non-target aquatic invertebrates may be killed in waters where this pesticide is used. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

Product Information

Natular XRT is a product for killing mosquito and midge larvae. This product's active ingredient, spinosad, is biologically derived from the fermentation of Saccharopolyspora spinosa, a naturally occurring soil organism. Natular XRT tablets release effective levels of spinosad over a period up to 180 days in mosquito breeding sites. The tablet is designed for easy application to catch basins.

Release of spinosad is affected by the dissolution of the Natular XRT tablet. If tablets become covered by obstructions such as debris, vegetation, or loose sediment as a result of high rainfall or flow, normal dispersion of the active ingredient can be inhibited. Water flow may increase the dissolution of the tablet, thus reducing the residual life of the tablet. Inspect areas of water flow to determine appropriate re-treatment intervals. To assure positive results, place Natular XRT tablets where they will not be swept away by flushing action.

Use Precautions

Integrated Pest Management (IPM) Programs

Natular XRT is intended to kill mosquito and midge larvae. Mosquitoes are best controlled when an IPM program is followed. Larval control efforts should be managed through habitat mapping, active adult and larval surveillance, and integrated with other control strategies such as source reduction, public education programs, harborage or barrier adult mosquito control applications, and targeted adulticide applications.

Insecticide Resistance Management (IRM)

Natular XRT contains a Group 5 insecticide. Insect biotypes with acquired resistance to Group 5 insecticides may eventually dominate the insect population if appropriate resistance management strategies are not followed. Currently, only spinetoram and spinosad active ingredients are classified as Group 5 insecticides. Resistance to other insecticides is not likely to impact the effectiveness of this product. Spinosad may be used in rotation with all other labeled products in a comprehensive IRM program.

To minimize the potential for resistance development, the following practices are recommended:

- Base insecticide use on comprehensive IPM and IRM programs.
- Do not use less than the labeled rates.
- Routinely evaluate applications for loss of effectiveness.
- Rotate with other labeled effective mosquito larvicides that have a different mode of action.
- In dormant rice fields, standing water within agricultural/crop sites, and permanent marine and freshwater sites, do not make more than 3 applications per year.
- Use insecticides with a different mode of action (different insecticide group) on adult mosquitoes so that both larvae and adults are not exposed to products with the same mode of action.
- Contact your local extension specialist, technical advisor, and/or Clarke representative for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, you may contact your local Clarke representative by calling 800-323-5727.

APPLICATION

Proper application techniques help ensure adequate coverage and correct dosage necessary to obtain optimum kill of mosquito and midge larvae. Natular XRT tablets can be applied prior to flooding, on snow and ice in breeding sites prior to spring thaw, or at any time after flooding in listed sites. Under normal conditions, one application will last the entire mosquito season, or up to 180 days, whichever is shorter. Natular XRT tablets will be unaffected in dry down situations and will begin working again during subsequent wetting events until the tablet is exhausted. Note: Natular XRT has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

Application Sites and Rates

Natular XRT tablets are designed to kill mosquitoes in natural and manmade depressions that hold water. Do not apply to water intended for irrigation. Examples of application sites are:

Storm water drainage areas, sewers and catch basins, woodland pools, snow pools, roadside ditches, retention ponds, freshwater dredge spoils, tire tracks, rock holes, pot holes and similar areas subject to holding water.

Natural and manmade aquatic sites, fish ponds, ornamental ponds and fountains, other artificial water-holding containers, flooded crypts, transformer vaults, abandoned swimming pools, construction and other natural or man-made depressions.

Stream eddies, creek edges, detention ponds.

Freshwater swamps and marshes including mixed hardwood swamps, cattail marsh, common reed wetland, water hyacinth ponds, and similar freshwater areas with emergent vegetation.

Brackish water swamps and marshes, intertidal areas.

Sewage effluent, sewers, sewage lagoons, cesspools, oxidation ponds, septic ditches and tanks, animal waste lagoons and settling ponds, livestock runoff lagoons, wastewater impoundments associated with fruit and vegetable processing and similar areas.

Also for use in dormant rice fields (for application only during the interval between harvest and preparation of the field for the next cropping cycle) and in standing water within agricultural areas where mosquito breeding occurs: pastures/hay fields, rangeland, orchards, vineyards, and citrus groves. Do not apply to waters intended for irrigation.

For mosquito kill in non- or low-flow, shallow depressions (up to 2 feet in depth), treat on the basis of surface area placing 1 Natular XRT tablet per 100 sq ft. Place tablets in the lowest areas of mosquito breeding sites to maintain continuous kill as the site alternately floods and dries up.

Natular XRT Application Chart

Number of Tablets per 100 sq. ft.	Water Depth (ft)
1	0 - 2
2	2 - 4
3	4 - 6
4	6 - 8

For applications in storm water drainage areas, sewers and catch basins, place 1 Natular XRT tablet into each catch basin.

For application sites connected by a water system, i.e., storm drains or catch basins, treat all of the water holding sites in the system to maximize the efficiency of the treatment program.

For application to small contained sites which may not be amenable to a rate of a single tablet per 100 sq ft, use 1 tablet per contained site (e.g., cesspools and septic tanks, transformer vaults, abandoned pools, and other small artificial water-holding containers).

Restriction: Do not apply to natural or artificial containers of water intended for consumption by people, animals, or livestock.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in a cool dry place in original container only.

Pesticide Disposal: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling:
For Refillable Container: Refillable container. Refill this container with spinosad pesticide formulation only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

For Nonrefillable Container: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Warranty: To the extent consistent with applicable law CLARKE MOSQUITO CONTROL PRODUCTS, INC. makes no warranty, express or implied, concerning the use of this product other than as indicated on the label. Buyer assumes all risk of use/handling of this material when use and/or handling is contrary to label instructions.

Natular® is a Registered Trademark of Clarke Mosquito Control Products, Inc.

Manufactured For:
Clarke Mosquito Control Products, Inc.
North Garden Avenue
Roselle, IL 60172

EPA Reg. No.: 8329-84

Net Contents: _____

Lot No.:_____

Available Container Size: 19.4 lbs / 220 Tablets

SAFETY DATA SHEET

NATULAR® XRT

Effective Date: 9 January 2019
v.02

SECTION 1. Identification of the Substance/Mixture and of the Company

1.1 Product Identifier

Formulation Identifier: Natular® XRT

EPA Registration Number: 8329-84

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses: Insecticide for control of mosquito and midge larvae

Uses Advised Against: See product label for use restrictions

1.3 Details of the Supplier of the Safety Data Sheet

Clarke Mosquito Control Products, Inc.
675 Sidwell Court
St. Charles, IL 60174 U.S.A.
+1 (630) 894-2000
Email: Clarke@clarke.com

1.4 Emergency Telephone Number

24-Hour Medical Emergency: POISON CONTROL Toll-free (800) 214 – 7753

24-Hour Transportation Emergency: INFOTRAC (800) 535-5053

SECTION 2. Hazards identification

United States (US)
According to OSHA 29 CFR 1910.1200 HCS (2012)

2.2 Classification of the Substance or Mixture

Not Classified

Hazard Symbol(s): None

Signal Word: None

Hazard statements: None

Precautionary Statements: None

2.3 Other Hazards Not Classifiable Under OSHA 2012 HCS

See product label for any additional hazards

SECTION 3. Composition/Information on Ingredients

3.1 Components

Substance Name	CAS No.	Concentration % w/w
Spinosad: Spinosyn A Spinosyn D	 131929-60-7 131929-63-0	6.25

Ingredients not identified are non-hazardous and/or are not required to be disclosed pursuant to 29 CFR 1910.1200 (2012), and are withheld as trade secret.

SECTION 4. First Aid Measures

4.1 Description of First Aid Measures

Eye Contact: Hold eye open and rinse slowly and gently with warm water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes then continue rinsing. Call a poison control center/doctor for treatment advice.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed.

Eye Contact: This product may release nuisance dust in handling or use. Dust may cause slight transient (temporary) eye irritation.

4.3 Indication of Immediate Medical Attention and Special Treatment

Treatment: Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended. For medical treatment information, contact the poison control hotline at 1-800-214-7753. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

SECTION 5. Fire-Fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Water Fog, Carbon Dioxide (CO_2), Dry Chemical, Foam

Unsuitable Extinguishing Media: None known

5.2 Special Hazards Arising From the Substance or Mixture

Specific Hazards: Under fire conditions some components may decompose. Combustion products may include CO and NOx.

5.3 Special Protective Equipment and Precautions for Fire-Fighters

Protection Against Fire: Wear positive pressure, self-contained breathing apparatus and protective firefighting clothing (includes fire-fighting helmet, coat, pants, boots, and gloves).

Special Procedures: Fight fires from a protected location. Dike fire control water for later disposal. Keep container cool by spraying with water.

SECTION 6. Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

General Precautions: Use appropriate protection (see section 8)

Environmental Precautions: Prevent product from entering into drains and waterways. Collect and dispose of this material and its container in accordance with national and regional regulations. If the product has contaminated surface water, inform the appropriate authorities. See Section 12 for additional ecological information.

6.2 Methods and Material for Containment and Cleaning Up

Clean Up Methods: Collect all material with shovel, other instrument, or by hand while using appropriate personal protection equipment, and place in closable marked containers.

SECTION 7. Handling and Storage

7.1 Precautions for Safe Handling

Handling: Keep out of reach of children. Do not take internally. Avoid contact with skin and eyes.

Hygiene Measures: Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Storage: Product should be stored in compliance with local regulations. Store in a cool, dry, well-ventilated place in the original container. Protect from excessive heat and cold. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilizers. Keep out of reach of children.

SECTION 8. Exposure Controls / Personal Protection

These precautions are suggested for conditions where the potential for exposure exists. Emergency conditions may require additional precautions.

8.1 Control Parameters

Component Name	CAS No.	List	Type	Value
Spinosyn A & Spinosyn D	131929-60-7 131929-63-0	DOW IHG	TWA	0.3 mg/m^3

8.2 Exposure controls

Engineering Controls: Use with adequate ventilation. Wash hands thoroughly after handling. Wash clothing before re-using.

Individual Protection Measures, such as Personal Protection Equipment:

Eye Protection: While not required, it is good practice to minimize eye contact by wearing eye protection such as safety glasses, goggles or face shield during use.

Skin Protection: Wear suitable protective clothing

Hand Protection: It is good industrial hygiene practice to minimize skin contact. If required or preferred, use suitable protective chemical resistant gloves such as latex, nitrile, or neoprene.

Respiratory Protection: None required

SECTION 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Appearance:	Solid tablet
Color:	Tan/white
Odor:	Earthy scent
Odor Threshold:	Not Available
pH:	Not Determined
Melting Point:	Not Determined
Freezing Point:	Not Applicable
Initial Boiling Point:	Not Applicable
Flash Point:	Not Determined
Evaporation Rate:	Not Applicable
Flammability:	Not Determined
Explosion limits [U/L]:	Not Applicable
Vapor Pressure:	Not Applicable
Vapor Density:	Not Applicable
Relative Density:	1.766 g/mL
Solubility:	Not Determined
Partition Coefficient:	Not Determined
Auto-Ignition Temperature:	Not Determined
Viscosity:	Not Applicable
Decomposition Temperature:	Not Available

Explosive Properties:	Not Available
Oxidizing Properties:	Not Available

SECTION 10. Stability and Reactivity

10.1 Reactivity

Not Available

10.2 Chemical Stability

Stable under normal conditions

10.3 Possibility of Hazardous Reactions

Hazardous Reactions:	None under normal conditions
Hazardous Polymerization:	Not known to occur

10.4 Conditions to Avoid

Protect from direct sunlight and excessive heat.

10.5 Incompatible Materials

Avoid contact with strong oxidizing agents, strong acids, strong bases

10.6 Hazardous Decomposition Products

None known under normal conditions of storage and use

SECTION 11. Toxicological Information

11.1 Information on Likely Routes of Exposure

Eye Contact: This product may release nuisance dust in handling or use. Dust may cause slight transient (temporary) eye irritation.

11.2 Information on Toxicological Effects

Acute Toxicity/Effects*

*Some acute toxicity values are not available for Natular® XRT. Presented values are based on toxicity values of a product of similar composition and form.

Oral, Rat LD_{50} :	> 5,050 mg/kg-bw
Dermal, Rat LD_{50} :	> 2,000 mg/kg-bw
Inhalation, Rat LC_{50} :	> 5.0 g/m^3
Skin Corrosion/Irritation:	Not a skin irritant
Serious Eye Damage/Irritation:	Not an eye irritant
Skin Sensitization:	Not a skin sensitizer
STOT – Single exposure	No data is available to indicate product or any components present at greater than 0.1% present a specific target organ toxicity hazard from single exposure.
Chronic Toxicity/Effects Germ Cell Mutagenicity	This product has not been tested. No data is available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Spinosad is not mutagenic.

Carcinogenicity:	This product does not contain any carcinogens as listed by OSHA, IARC, or NTP. Spinosad is not carcinogenic.
Reproductive Effects:	No data is available to indicate product or any components present at greater than 0.1% cause reproductive or teratogenic toxicity. For Spinosad: in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
STOT – Repeated Exposure:	In animals, spinosad has been shown to cause vacuolation of cells in various tissues. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

SECTION 12. Ecological Information

12.1 Ecotoxicity

Product specific data is not available. Data referenced is in relation to the active ingredient, Spinosad. Spinosad is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Toxicity to Fish:	96-hr Acute LC_{50} 5.0 mg/L, Common Carp (*Cyprinus carpio*)
	96-hr Acute LC_{50} 5.9 mg/L, Bluegill Sunfish (*Lepomis macrochirus*)
	96-hr Acute LC_{50} 30 mg/L, Rainbow Trout (*Oncorhynchus mykiss*)
Toxicity to Aquatic Invertebrates:	48-hr Acute EC_{50} 1.5-14.0 mg/L, Water Flea (*Daphnia magna*)
	48-hr LC_{50} > 7.9 mg/L, Mysid Shrimp (*Americamysis bahia*)
Toxicity to Aquatic Plants:	5-d EC_{50} 8.1 mg/L, Blue Green Algae (*Anabaena flos-aquae*)

12.1 Persistence and Degradability

Product specific data not available. Data referenced is in relation to the active ingredient, Spinosad.

Log K_{ow}:	Spinosyn A: 3.91; Spinosyn D: 4.38 (distilled water)
Bioaccumulation:	Bioconcentration potential is low (BCF < 100)
Bioconcentration Factor:	Spinosyn A: 19; Spinosyn D: 33 mL/g (fish)
Mobility in Soil:	Potential for mobility in soil is low (K_{oc} between 500 and 2000)
Partition Coefficient, K_{oc}:	701

SECTION 13. Disposal Considerations

13.1 Waste Treatment and Disposal methods

Consult product label for disposal instructions. Avoid release to the environment. Improper disposal of excess product or rinsate is a violation of the Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA regional office for guidance.

SECTION 14. Transport Information

14.1 DOT (US)
Not regulated (Bulk and Non-Bulk Quantities)

14.2 IMDG (Vessel)

UN Number:	3077
Hazard Class:	9
Packing Group:	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S. (Spinosad)

Marine Pollutant: Yes

14.3 ICAO/IATA (Air transport)

UN Number: 3077
Hazard Class: 9
Packing Group: III
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S. (Spinosad)
Environmental Hazard: Yes

SECTION 15. Regulatory Information

FIFRA Information: This chemical is a pesticide product regulated by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information for safety data sheet, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Keep Out of Reach of Children

For medical treatment information or emergency: Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-214-7753 for emergency medical treatment information.

Precautionary Statements

Environmental Hazards

This product is toxic to aquatic organisms. Non-target aquatic invertebrates may be killed in waters where this pesticide is used. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

Other Federal Regulations

SARA TITLE III CLASSIFICATION
Section 302: None
Section 311/312: Immediate (acute) hazard
Section 313: None

CERCLA RQ: None

OSHA HAZARD COMMUNICATION STANDARD: This product is not considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. California Proposition 65: Not listed

STATE RIGHT-TO-KNOW : National, state, provincial or local emergency planning, community right-to-know or other laws, regulations or ordinances may be applicable--consult applicable national, state, provincial or local laws.

SECTION 16. Other Information

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources we believe to be reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared as is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

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clarke

DUET™

DUAL-ACTION EFFICACY

Adulticide for Mosquito Control

Delivers more control of natural mosquito populations

Versatile in a range of operational conditions

Effective even at lower rates of application

RESOURCE GUIDE

TWO ACTIVE INGREDIENTS FOR GREATER STRENGTH AND VERSATILITY

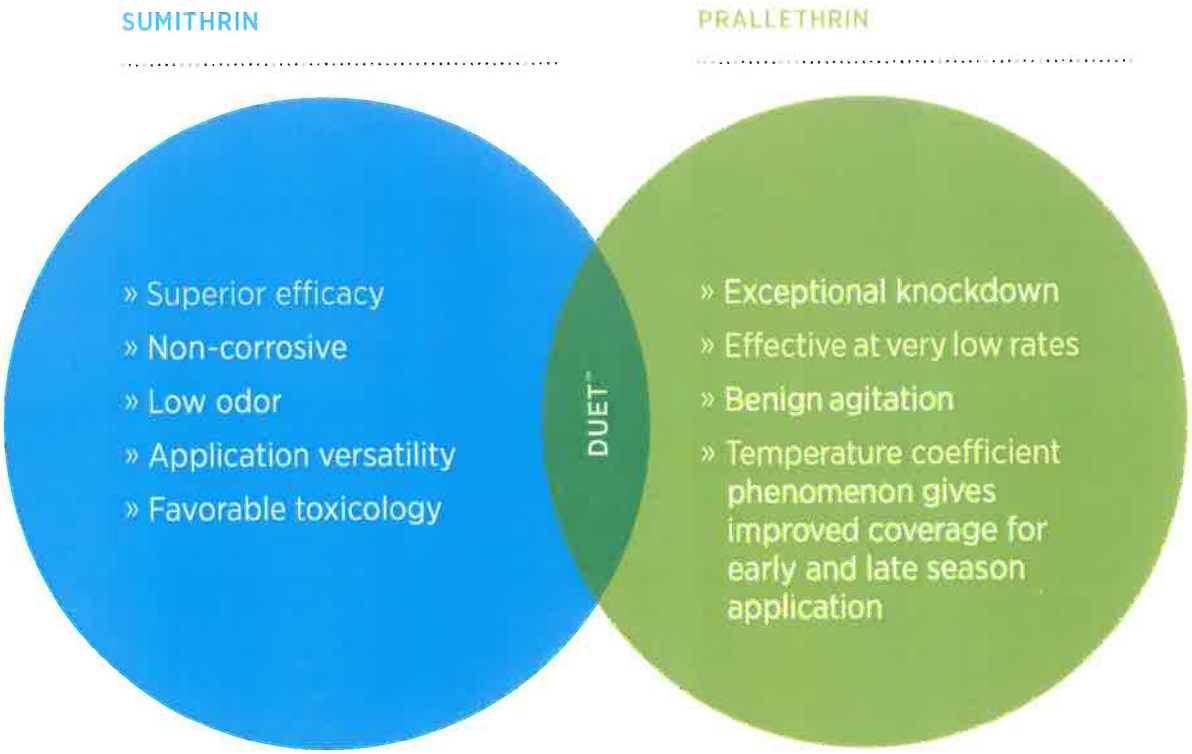
Duet,™ an advanced dual-action mosquito adulticide, combines the proven efficacy of Sumithrin® (the active ingredient found in Anvil®) plus the exceptional knock-down of prallethrin. Together, these two active ingredients provide you a unique, effective and faster way to control mosquitoes.

DUET'S BENEFITS

Delivers more control of natural mosquito populations

Versatile in a range of operational conditions

Effective at even low rates of application



Stronger and Faster

With the combination of Sumithrin and prallethrin, Duet effectively controls more mosquitoes more quickly. Duet has a faster knockdown than other products. In addition, despite its potent combination of active ingredients, Duet has approximately the same toxicity profile as Anvil. This offers increased efficacy with the *same low toxicity.*

Biodegradable

More than a generation ago, scientists created synthetic pyrethroids, which emulate naturally occurring pyrethrins found in chrysanthemum flowers. Two of these synthetic pyrethroids — Sumithrin and prallethrin (brand name ETOC®) — kill mosquitoes effectively, yet biodegrade rapidly in the presence of sunlight and/or microorganisms. The two actives with the synergist piperonyl butoxide (PBO) yield superior performance for mosquito control.

Active Ingredients:

Prallethrin (1%)
(RS)-2-methyl-4-oxo-3-(2-propynyl) cyclopent-2-enyl-(1RS)-cis, transchrysanthemate

Sumithrin (5%)
3-Phenoxybenzyl-(1RS, 3RS; 1RS, 3SR)-2, 2-dimethyl-3-(2-methylprop-1-enyl) cyclopropanecarboxylate

Piperonyl Butoxide (5%)

Other Ingredients (89%)

BENIGN AGITATION: EXCELLENT KNOCKDOWN AND GREATER CONTROL

Field trial and cage observations have shown that Duet™ causes benign agitation — a non-biting excitation of mosquitoes. This has the potential to draw mosquitoes from a resting state, causing more of them to come in contact with droplets and increase efficacy. As a result, you can have greater control on a larger percentage of the total mosquito population.

Benign Agitation Studies Prove Duet's Effectiveness

In laboratory studies,* benign agitation was demonstrated by looking at the active ingredients in Duet, separately

Ultra low volume (ULV) droplets were introduced into a wind tunnel. The response of resting mosquitoes was video recorded and movement/flight pattern observed before, during, and after exposure. Mosquitoes exposed to insecticides moved faster when sprayed. Prallethrin produced increased flight activity during spray while Sumithrin (the other active ingredient in Duet) produced increased activity during the post-spray period.

In another study** that showed the formulated product of Duet increases the percentage of resting mosquitoes to take flight post spray, it was also demonstrated that mosquitoes remain in flight longer than with competitive formulations.

The bottom line: With Duet, more resting mosquitoes take flight to come in contact with more droplets, thus improving the efficacy of the application.

*Study by by Gary G. Clark and Sandra A. Allan of the CMAVE, USDA, Gainesville, FL; Miriam F. Cooperband with APHIS, USDA, Otis ANGB, MA, and William Jany, Clarke. Tests conducted with female *Culex quinquefasciatus* using a range of adulticides with different active ingredients.

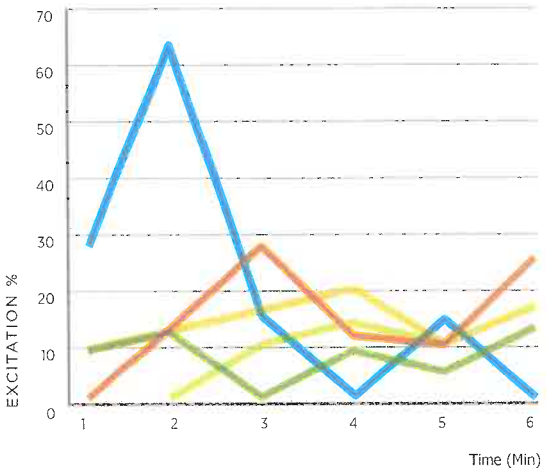
**Work by Gary Benzon, Benzon Research, Carlise, PA.

Key:

Duet™ Py / PBO Dibrom Concentrate

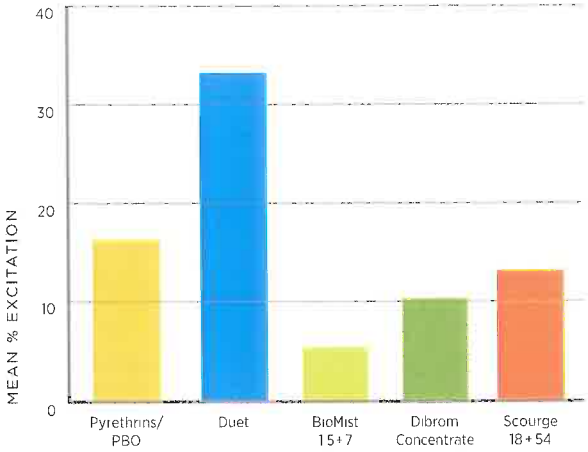
Scourge BioMist

Excitation Over Time



Source: G. Benzon, Benzon Research, Carlisle, PA.

5 Minutes After Exposure



Source: Dr. Hajime Hirai, Sumi World, 1997

Comparative Insecticidal Activity

COMPOUND	LD50 (µG / INSECT) MOSQUITO[2]
Prallethrin	0.0032
Pyrethrins	0.022

[2] *Culex pipiens pallens, female adult*

Prallethrin exhibits high killing activity against mosquitoes compared to pyrethrins.

We believe that an important part of being an environmental steward is product rotation. Product rotation maximizes the effectiveness of every program by preventing cross-resistance.

To help select products for rotation in your program, visit clarke.com/mosquitocontrolproducts to view our full line of product offerings.

PROFILE OF AN ADVANCED ADULTICIDE OPTION

Product Density

ACTIVE INGREDIENT	SUMITHRIN	PRALLETHRIN	DUET
Specific Gravity	1.060	1.03	.87
Molecular Weight	350.5	300.4	–
Viscosity	–	–	13.4cp @24 C
Vapor Pressure	1.4 x 10^{-7}mm/Hg @21.4°C	3.5 x 10^{-5}mm/Hg @21.4°C	–

Toxicology

STUDY	SUMITHRIN	PRALLETHRIN
96 Hr Acute Flow Through LC50 Rainbow Trout	17 µg/l	12 µg/l
96 Hr Acute Flow Through LC50 Bluegill	18 µg/l	22 µg/l
48 Hr Acute EC 50 *Daphnia magna*	4.3 µg/l	6.2 µg/l
Honey Bee 48 Hr Acute Contact LD50	0.064 µg/bee	0.028 µg/bee
Acute Oral LC50 Bobwhite Quail	2510 mg/kg	1171 mg/kg

Acute Toxicology

SPECIES	DUET
Oral LD50 (rats)	> 5000 mg/kg
Dermal LD50 (rats)	> 5000 mg/kg
Eye Irritation (rabbits)	Minimal irritation
Inhalation LC50 (rats)	> 2.04 mg/l
Skin Sensitization (guinea pig)	Negative

Environmental Toxicity

In Sunlight: The active ingredients in Duet® are photolabile. The molecules easily decompose in the presence of sunlight. The half-lives of Sumithrin and prallethrin in water in the presence of light range from 9.1 to 13.9 hours. The degradation products of Sumithrin and prallethrin are non-persistent. Moderately rapid aerobic and anaerobic soil degradation was found in the absence of sunlight.

In Soil: Sumithrin and prallethrin are not readily transported from the site of application. Neither Sumithrin nor prallethrin bioaccumulates.

Eco-Tier® Ranking:

The Clarke Eco-Tier® Index offers three tiers of products, equipment and services ranked by their impact on the environment. Duet® is ranked as an "Advanced" product.

CAGED TRIAL RESULTS SUPERIOR KNOCKDOWN AND CONTROL

Initial Field Research

Initial field research for Duet has demonstrated excellent results. Tests were conducted involving the following species:

Michigan: *An. punctipennis, Oc. trivittatus* and *Ae. vexans*

Florida: *Oc. taeniorhynchus*

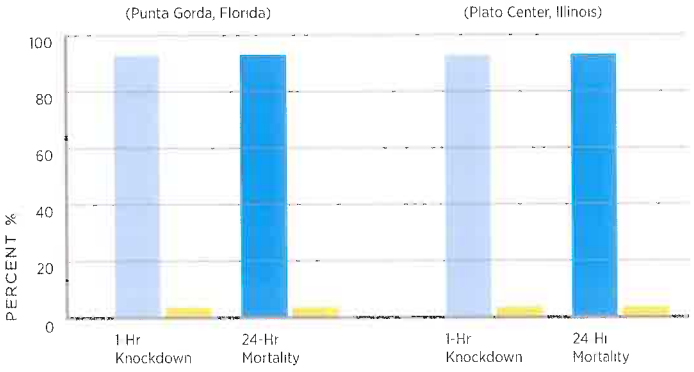
Illinois: *Coq. perturbans, Oc. trivittatus* and *Culex restuans*

Protocols:

- Mosquitoes collected via CO_2 baited ABC traps
- Mouth-aspirate mosquitoes
- Cages placed @100-200' intervals
- 10 min. exposure then transferred to holding cages
- Mosquitoes fed 10% sugar-water solution
- Monitor knockdown @1-Hr, and 24-Hr mortality
- Controls handled same as treated mosquitoes

Duet Ground ULV @150'

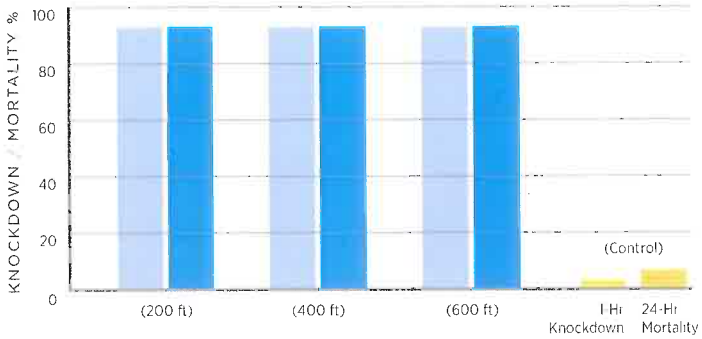
Rate: 0.41 oz/acre rate



Duet ULV at Long Distances

Location: Saginaw, MI – 9/1/06

Rate: 0.0012 ai/acre Sumithrin and 0.0003 lbs/acre prallethrin



Even at distances up to 600ft from the spray nozzle, Duet demonstrates superior knockdown and control.

APPLICATION METHODS OPTIMIZED FOR YOUR EQUIPMENT

Duet™ has been proven effective whether applied by air or ground (truck, ATV, backpack). Optimized for all standard ULV application equipment and nozzles, Duet is non-corroding to your application apparatus.

Applying Duet by Air

Aerial applications can be completed with fixed wing or rotary aircraft. Based on your program needs. Duet can be applied at a range of .41 to 1.23 fl. oz/acre. Droplet VMD (volume median diameter) should be optimized between 25—30 microns. In wind tunnel atomization studies, Duet has shown to effectively produce this droplet size range when sprayed through equipment that has been correctly calibrated.

To Optimize Your Aerial Application:

1

Select the Proper Nozzle

Refer to the table to achieve the optimized less-than-30-micron droplet VMD. Some of the best nozzles for Duet usage are rotary (e.g. Beecomist or Micronair). Note that flat fan nozzles require orientation 130 degrees into the wind, and may not produce droplets within the desired spectrum when aircraft travel below 170 mph.

AIRCRAFT TYPE	NOZZLE TYPE	SIZE	ANGLE
Fixed wing	Flat fan	80-110; small orifice 005-04	135° forward
Fixed wing	Micronair Nozzles** AU5000*	Standard cage mesh	Straight back
Fixed wing	Beecomist*	10, 20 or 40 µm screen	Straight back
Rotary wing	Micronair Nozzles** AU5000*	Standard cage mesh	Straight back
Rotary wing	Beecomist*	40 µm screen	Straight back

Adjust RPM of nozzles to deliver the appropriate droplet spectrum required for your application
AU4000 AU5000 AU6000 Brushless

Note. Data is for general information only. Actual droplet size will depend on the application conditions and factors such as nozzle and sprayer condition. Always calibrate sprayers to ensure desired dosage rate and conditions are met. As always, read and follow label directions.

2

Calibration Process

To adjust your spray system for proper flow rate:

- Determine the number of acres per minute your aircraft will treat by using the first formula shown.
- Select the Duet labeled flow rate (in ounces per acre) required for your needs.
- Using the second formula, multiply the figures derived from the two steps above to determine the proper Calibration Flow.

$$\frac{\text{Swath} \times \text{Speed}}{495} = \text{Acres / Min}$$

$$\left(\frac{\text{Acres}}{\text{Min}}\right)\left(\frac{\text{Oz}}{\text{Acre}}\right) = \frac{\text{Oz}}{\text{Min}}$$

↓

Calibration Flow

PRALLETHRIN	SUMITHRIN	PBO	FLOW RATES
0.00072 lbs. AI/acre	0.0036 lbs. AI/acre	0.0036 lbs. AI/acre	1.23 fl. oz/acre
0.00044 lbs. AI/acre	0.0022 lbs. AI/acre	0.0022 lbs. AI/acre	0.75 fl. oz/acre
0.00036 lbs. AI/acre	0.0018 lbs. AI/acre	0.0018 lbs. AI/acre	0.61 fl. oz/acre
0.00024 lbs. AI/acre	0.0012 lbs. AI/acre	0.0012 lbs. AI/acre	0.41 fl. oz/acre

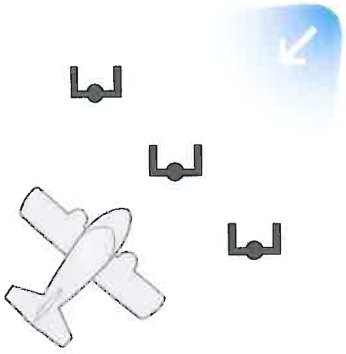
3

Droplet Dynamics

Droplet VMD should be optimized between 25-30 microns to achieve maximum performance. Confirm the droplet size by placing slide impingers with Teflon coated slides as described in the diagram. Droplets on slides can be measured using a compound microscope with a mechanical stage and an ocular micrometer. Starting at one end of the slide, measure each droplet as they pass through the eyepiece micrometer. The expected spread factor for Duet is 0.59 (minimum of 200 droplets collected). Use this factor until the actual spread factor is determined

To Determine Appropriate Offset:

- Place droplet collectors 50 ft apart and 90 degrees to the wind direction
- Fly directly into wind over slides at 75 ft. Spray for 15 seconds after passing over slide collectors.
- Wait 10 minutes after application for upwind droplets to reach collectors.



Duet™ By Ground

Duet should be applied using ULV spray equipment capable of producing ULV spray droplets with a VMD of 8-30 microns.

Use the Following Guidelines, Assuming a 300 ft Swath:

Fl. oz/acre	* Flow rates in fluid oz/min at truck speeds of:			
DUET	5 MPH	10 MPH	15 MPH	20 MPH
1.23 oz/acre	3.7 oz	7.4 oz	11.2 oz	14.9 oz
0.75 oz/acre	2.3 oz	4.6 oz	6.8 oz	9.1 oz
0.61 oz/acre	1.9 oz	3.7 oz	5.6 oz	7.4 oz
0.41 oz/acre	1.2 oz	2.5 oz	3.7 oz	5.0 oz

*Assumes a 300 ft spray swath

To Optimize Your Ground Application:

To achieve maximum performance, droplet VMD should be optimized between 10-20 microns. Droplet spectrum may be determined by using the hot-wire method using a DCIII (AIMS) unit that measures and calculates VMD or MMD for oil-based liquids. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Standard Droplet Collection:

- Use Teflon-coated microscope slide
- Attach slide to 3'—4' rod
- Stand 10'—25' downwind from nozzle
- Distance is dependent on sprayer velocity
- Higher velocity of sprayer = further distance from nozzle (not to exceed 25')
- Swing rod (with coated slide facing the insecticide) once rapidly in a baseball swing/diagonal motion toward the sprayer, through the spray cloud

Standard Droplet Measurement:

- Use a compound microscope equipped with a mechanical stage and an ocular micrometer placed in the eyepiece.
- Starting at one end of the slide, measure each droplet as they pass through the eyepiece micrometer.
- A minimum of 200 droplets should be measured to obtain an adequate sample.
- Spread factor for Duet: 0.59.

ENVIRONMENTAL CONDITIONS FOR AIR AND GROUND APPLICATION

Duet should be applied when conditions are favorable for ULV applications. Favorable application conditions occur when the atmosphere at application height to immediately above ground level is stable. This condition is characteristic of an inversion, which occurs when temperatures increase with height. Stability is also influenced by solar radiation and heat exchange between air, soil and vegetation. As a result, favorable conditions for ULV applications usually occur prior to sunrise and after dusk. Duet has been shown to have a negative temperature coefficient. This means it is extremely effective, early and late season when temperatures are between 50°-65° F and most mosquitoes are active.

FREQUENTLY ASKED QUESTIONS

Q: What is prallethrin and how did it come into use as a mosquito adulticide?

A: Prallethrin was developed in the 1980s as an alternative to pyrethrins. It was first registered for use with the U.S. EPA in 1995. Since then, it has been in use in pest control products throughout the world.

Q: Does Duet™ pose a health risk to community residents?

A: All products involve a balance between risks and benefits. The active ingredients in Duet have been carefully tested. Duet is registered for ground and aerial applications in outdoor residential and recreational areas.

Q: Does the combination of prallethrin and Sumithrin in Duet increase toxicity?

A: No. Duet has the same toxicology profile as Anvil.

Q: How does Duet break down in the environment?

A: Duet's active ingredients break down rapidly in sunlight into carbon dioxide and water vapor.

Q: What is Sumithrin, and how does it impact mosquitoes?

A: Sumithrin, best known in the Anvil formulation, is an active ingredient used for adult mosquito control. A synthetic pyrethroid, Sumithrin replicates the mosquito controlling properties of pyrethrin, derived from chrysanthemum plants. It has been widely used in mosquito control since 1975, and in the Anvil formulation has been used in every major mosquito control effort in the U.S. since 1999. Both prallethrin and Sumithrin interrupt the sodium channel complex in mosquito nerve axons.

Q: Is adult control effective?

A: Generally, spraying for adult mosquitoes is highly effective at killing adult mosquitoes on the wing. With Duet, the dual-active formulation provides excellent control among commonly controlled mosquitoes even at low application rates

Q: How much Duet is typically applied?

A: Duet is applied in very low dosages, from less than half an ounce to a little more than one ounce of formulated product per acre (.41 to 1.23 fl oz/ac). In lay terms, approximately a teaspoon of formulated product treats an area the size of a football field.

Clarke

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Clarke is a global environmental products and services company. Each year, Clarke helps make communities around the world more livable, safe and comfortable by pioneering, developing and delivering environmentally responsible disease prevention and habitat management solutions. In 2008, Clarke founded The Clarke Cares Foundation, a non-profit created to provide disease prevention support for communities with critical needs.

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clarke

NATULAR®

NATURALLY DERIVED ACTIVE INGREDIENT

Larvicide for Mosquito Control

- Reduced Risk active ingredient
- Unique mode of action
- Novel class of chemistry for public health
- Formulated for sustainable solutions

RESOURCE GUIDE

THE FIRST AND ONLY COMPLETE PORTFOLIO OF LARVICIDES WITH A NATURALLY DERIVED ACTIVE INGREDIENT

For years there have been only five active ingredient choices for larval control. Now there's a sixth, and it's found only in Natular®. With formulations developed and manufactured exclusively by Clarke, its patented ingredient, spinosad, is a product derived from a naturally occurring bacterium. Natular is in a chemical class different from all other larvicides and has a unique mode of action that helps fight resistance. Simply stated, Natular is like no other larvicide on the market.

BENEFITS INCLUDE >>

Reduced Risk active ingredient

The active ingredient in Natular formulations is designated by the E.P.A. as Reduced Risk. This means reduced risks to human health and the environment when compared to other chemical and biochemical larvicides.

Unique mode of action

The unique mode of action of spinosad ensures no cross resistance with other chemistries.

Novel class of chemistry

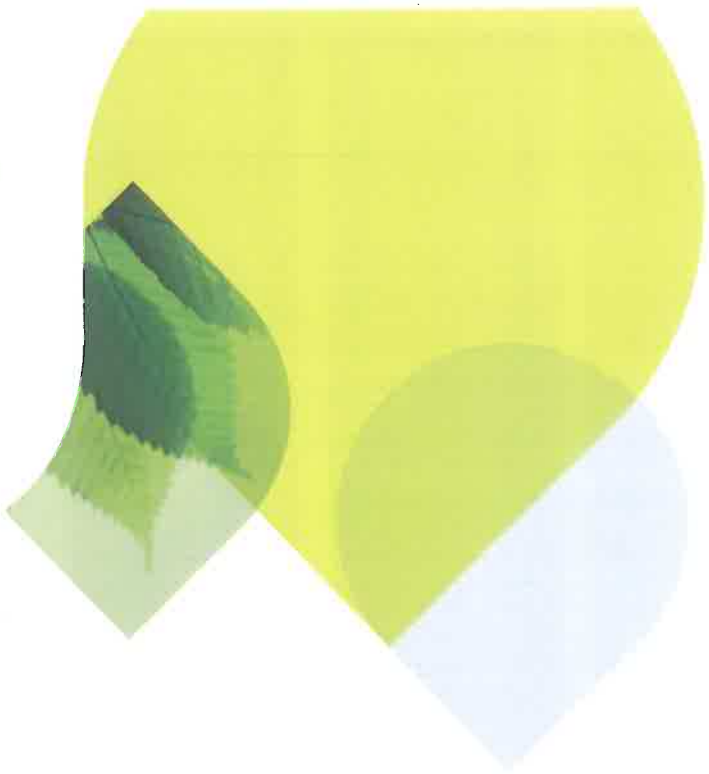
Natular formulations are Group 5 insecticides — the first public health larvicides in this class — that provide you confident, resistance fighting performance.

Formulated for sustainable solutions

All formulations, except Natular DT are OMRI (Organic Materials Review Institute) Listed, enabling them to be used in and around organic agriculture. The international tablet has not been submitted for review.

What makes Natular® so unique?

Natular and its active ingredient, spinosad, offer a healthier alternative to protecting the well-being of communities.



Provides the right balance of efficacy with environmental stewardship

Offers exceptional control of larvae from the first through early 4th instar stages

Excellent option for resistance management and rotational use

Minimal PPE requirements for application

All formulations of Natular were designed as sustainability solutions

Breaks down rapidly in soil — spinosad degrades into carbon dioxide and water

Six advanced formulations to fit any habitat

Green Chemistry active lets you use with confidence in your community

WE'RE SETTING NEW BENCHMARKS WITH SPINOSAD

Spinosad, a product derived from a naturally ocurring soil bacterium, is the active ingredient in Natular. It provides the perfect balance of efficacy and environmental stewardship. Spinosad has an excellent safety record. It breaks down quickly and does not bioaccumulate in the environment. In addition, all inert ingredients in domestic Natular formulations are included on the EPA's List of Minimal Risk Inert Ingredients.

The Structure

Chemical name: *Saccharopolyspora spinosa*
Common name: Spinosad, a patented combination of spinosyn A and spinosyn D

	SPINOSYN A	SPINOSYN D
Molecular Formula	$C_{41}H_{65}NO_{10}$	$C_{42}H_{67}NO_{10}$
Molecular Weight	731.98	746.00
Color and State	Crystalline Solid, White to Tan	Crystalline Solid, White to Tan
Vapor Pressure (25°C)	3.0×10^{-11} kPa	2.0×10^{-11} kPa
Melting Point	84–100°C	161–170°C
Water Solubility: (20°C)		
pH 5	290 mg/L	28.7 mg/L
pH 7	235 mg/L	0.332 mg/L
pH 9	16 mg/L	0.053 mg/L

The Origins of Spinosad and Natular®

In 1982, a vacationing scientist took a soil sample from a drum that was used to make rum in the Caribbean. From this sample, a new species of bacteria was identified in 1986: *Saccharopolyspora spinosa*. (This translates into "spiny sugar.") The bacteria was later fermented in a lab and yielded spinosyns A and D, the most active metabolites of *S. spinosa*. Together, they comprise spinosad.

In 2002, Clarke acquired the public health development rights to spinosad. After six years and over 35,000 hours of development and regulatory review, Natular larvicides became the first public health label for spinosad, and also the first aquatic use pattern with the active as well.

The First Reduced Risk Larvicide

In 1993, the U. S. Environmental Protection Agency created the Reduced Risk Pesticide Initiative to "encourage the development, registration and use of lower-risk pesticide products, which would therefore result in reduced risks to human health and the environment when compared to existing alternatives."

Spinosad, the active ingredient in Natular, is one of only sixteen chemicals registered as a Reduced Risk pesticide and the only Reduced Risk larvicide for mosquito control. According to the EPA, the advantages of Reduced Risk pesticides include:

- Low impact on human health
- Lower toxicity to non-target organisms (birds, fish, plants)
- Low potential for groundwater contamination
- Low use rates
- Low pest resistance potential
- Compatibility with Integrated Pest Management (IPM) practices

Recipient of The Presidential Green Chemistry Challenge Award

Spinosad is one of only five pesticide products to ever receive the Presidential Green Chemistry Challenge Award*, one of the U.S. Government's highest environmental honors.

Green chemistry, also known as sustainable chemistry, is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances. The benefits of green chemistry technologies include:

- Reduced waste, eliminating costly end-of-the-pipe treatments
- Safer products
- Reduced use of energy and resources

Green chemistry applies across the life cycle, including the design, manufacture, and use of a chemical product.

*www.epa.gov/greenchemistry

A REVOLUTIONARY MODE OF ACTION THAT'S IDEAL FOR ROTATIONAL USE

Delivering a Unique Mode of Action

The active ingredient in Natular® works like no other larvicide. Spinosad alters the function of insect nicotinic acetylcholine receptors in a unique action that causes continuous nervous impulses. This constant involuntary nervous stimulus causes paralysis and death. The action results primarily by ingestion, as well as by contact with the active.

In a Class by Itself: Group 5

Because of its unique mode of action, spinosad is classified as a Group 5 insecticide by the Insecticide Resistance Action Committee. It's the only active ingredient classified in Group 5 used for mosquito control. Because this class is unique and distinct from all other public health larvicides, this makes the Natular portfolio truly one of a kind.

It also makes an excellent option for resistance management. Its novel mode of action and distinct class grouping makes Natular ideal for rotational use since it shows no cross-resistance with existing products used for mosquito control.

Proven Performance

The consistent performance of spinosad — logged and observed in testing and operational work — has demonstrated exceptional control of larvae from the first through early fourth instar stages. Spinosad begins to work immediately upon contact and ingestion; its first visible effects are seen within hours of application. Optimal control is reached within 24-72 hours, sustained at very uniform levels for the labeled control period.

Natular formulations have been very effective in a wide spectrum of habitats in more than 50 domestic tests and 15 international studies. Data has been gathered on more than 20 species and will be expanded as usage increases.

We believe that an important part of being an environmental steward is product rotation. Our product rotation methods maximize the effectiveness of every program by preventing cross-resistance. To help select products for rotation in your program, visit clarke.com/mosquitocontrolproducts to view our full line of product offerings.

FORMULATED TO MEET THE NEEDS OF ENVIRONMENTALLY SENSITIVE HABITATS

Meets Organic and Sustainable Practice Standards

Natular® larvicides were formulated with a respect for the ever increasing number of communities with green or sustainability programs. All formulations except Natular DT have been listed by OMRI for use in organic production. Just knowing these products can be used in and around organic food production can give you confidence when using in public spaces.

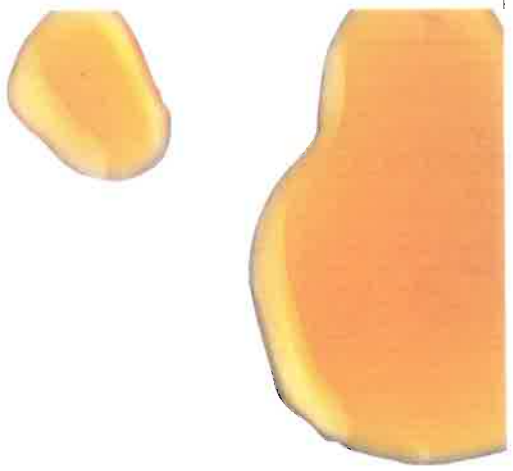
Natular is the first larvicide evaluated as a Reduced Risk product by the EPA. All ingredients in all its formulations are included on the EPA's List of Minimal Risk Inert Ingredients. In fact, spinosad received the EPA's Presidential Green Chemistry Challenge Award in 1999. In addition, two of the portfolio's formulations have been evaluated by WHOPES (World Health Organization Pesticide Evaluation Scheme).

Bottom Line: Natular formulations meet the criteria that make them an excellent choice for not only labeled environmentally-sensitive habitats but also for the growing number of communities with green or sustainable practice guidelines.

Visit www.epa.gov/opprd001/workplan/reducedrisk.html for more details.

Introducing NextGen Products

Natular is also the first product to be ranked in the "NextGen" category on the Clarke Eco-Tier™ Index of environmental impact.



SIX DISTINCT FORMULATIONS

Natular® is available in six advanced formulations to fit the needs of any habitat. Each formulation offers exceptional handling characteristics and is labeled for only protective eyewear PPE.

	FORMULATION	CARRIER & APPEARANCE	APPLICATION RATE*	BULK DENSITY
EC	Single-brood liquid	Liquid, dark and slightly cloudy in appearance	1.1 – 2.8 fl oz/ac	9.68 lbs/gal
G	Single-brood granule	Granules made from corn cobs	3.5 – 9 lbs/ac	33 lbs/cf
T30	Multiple-brood 30-day tablet	A dust-free tablet	1/100 sf	6 g/tablet
XRT	Multiple-brood extended release tablet	A dust-free tablet	1/100 sf	40 g/tablet
G30	Multiple-brood extended release granule	Granules made from silica	5 – 20 lbs/ac	85 lbs/cf
DT (Available in select states. Check website.)	Multiple-brood tablet for containerized water	Bi-layer tablet	1/container	1.35 g/tablet

For International Use: Natular DT

In rural and urban areas of Latin America, the Middle East, Africa and Asia, the need to treat water barrels and other containers is crucial in the fight against Dengue, Yellow Fever and Chikungunya. To meet this need, Clarke developed the innovative bi-layer Natular DT formulation.

One layer works immediately while the second dissolves slowly. Thus, each tablet can treat a 200 liter barrel of water for more than 60 days. Successfully evaluated by WHOPES, Natular DT has significantly reduced volume requirements, making transportation and storage much easier.

2EC

G30

T30

XRT

G

REDUCING ENVIRONMENTAL IMPACT

The active ingredient in Natular® larvicides, spinosad, is a highly selective insect control product with high potency for target insects but low toxicity toward mammals and other non-target organisms.

Environmental Fate

In Soil: Spinosad degrades readily in the soil environment and is non-persistent. Primary mechanisms of degradation are sunlight photolysis and microbial breakdown. Under field conditions, spinosad breaks down rapidly in the soil with observed half-lives of less than one day, degrading into carbon dioxide and water by the soil microbial community. It is moderately to strongly absorbed by soil particles and is considered to be "relatively immobile to immobile" with regard to leaching.

In Water: In natural water systems, spinosad degrades rapidly in sunlight. A water column half-life of less than one day has been observed in artificial pond systems in outdoor conditions.

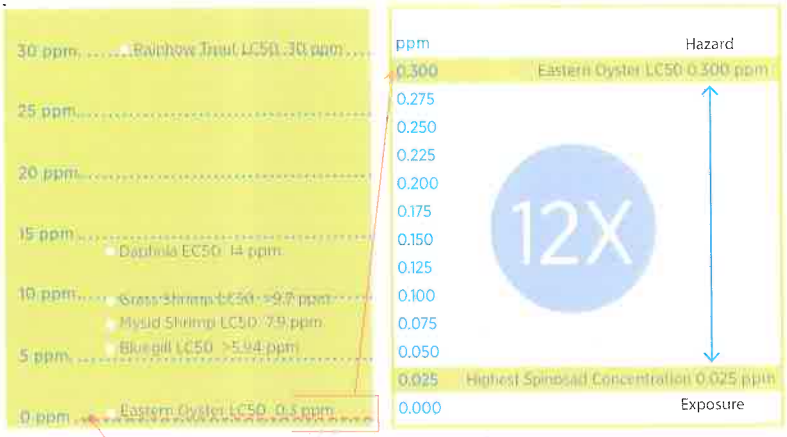
In Animals: Because of its unique mode of action, spinosad is highly selective to insects. In mammals, spinosad is not readily absorbed through the skin; any minute amounts that are absorbed or ingested are rapidly metabolized to inactive by-products, which are excreted. As a result, it has very low acute toxicity. In long term studies, no evidence of carcinogenicity, mutagenicity, or neurotoxicity has been observed.

Toxicity, Mutagencity, Genotoxicity

Spinosad is well known to present a relatively low risk to beneficial and non-target insects compared to other broad-spectrum, insecticide products. It is not acutely toxic to terrestrial birds, wildlife, or to fish and most aquatic invertebrates. Investigated in a battery of genotoxicity studies, it has been found to possess no mutagenic potential.

During the six years of development and the operational use of Natular products since introduction in 2009, there have been no observed or validated non-target effects. Many characteristics of spinosad make this possible: low dose rate, rapid breakdown by sunlight, binding to soil, rapid dissolution in water, as well as non-target location and lifecycle at time of application.

Indicator Aquatic & Invertebrate Species Sensitivity to Spinosad



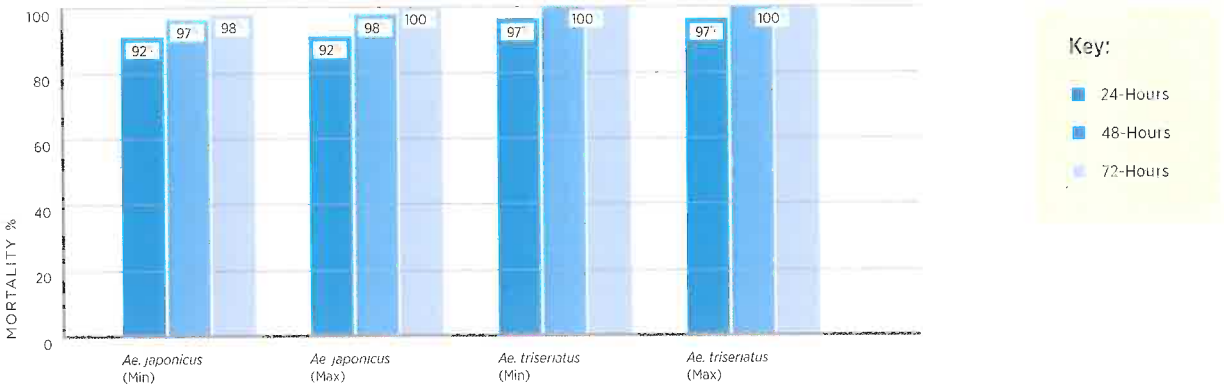
Spinosad concentration level with Natular products: 0.015 - 0.025 ppm

Spinosad demonstrates a 12X margin of safety when comparing exposure to acute toxic hazard.

RESULTS

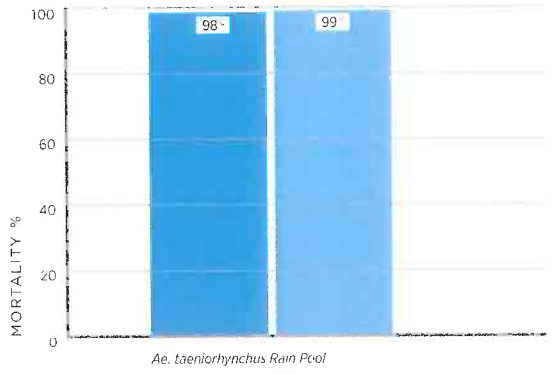
Natular® EC

Rate: 1.1 fl oz/ac (Min), 2.8 fl oz/ac (Max)
Location: Kentucky, 2008



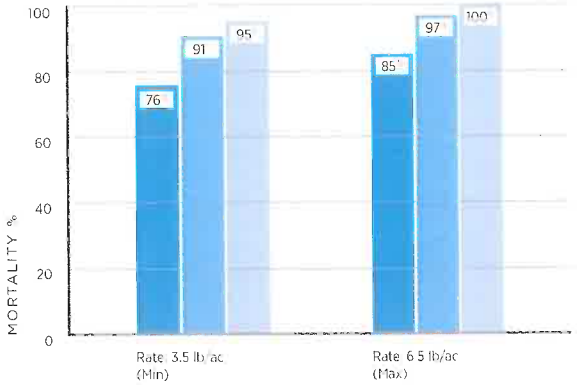
Natular G

Rate: 9 lb/ac (Max)
Location: Florida, 2008



Natular G

Species: *Ae. trivittatus*
Location: Kentucky, 2008

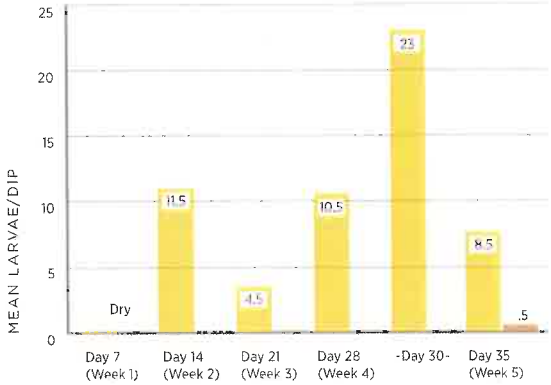


RESULTS

Key:
Unt
Trt

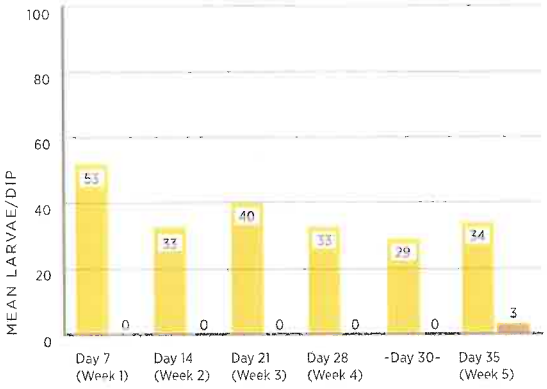
Natular G30

Habitat: Retention Ponds/*Ae. vexans* - *Cx. pipiens*
Rate. 10 lb/ac (<Mid)
Location: Illinois, 2008



Natular T30

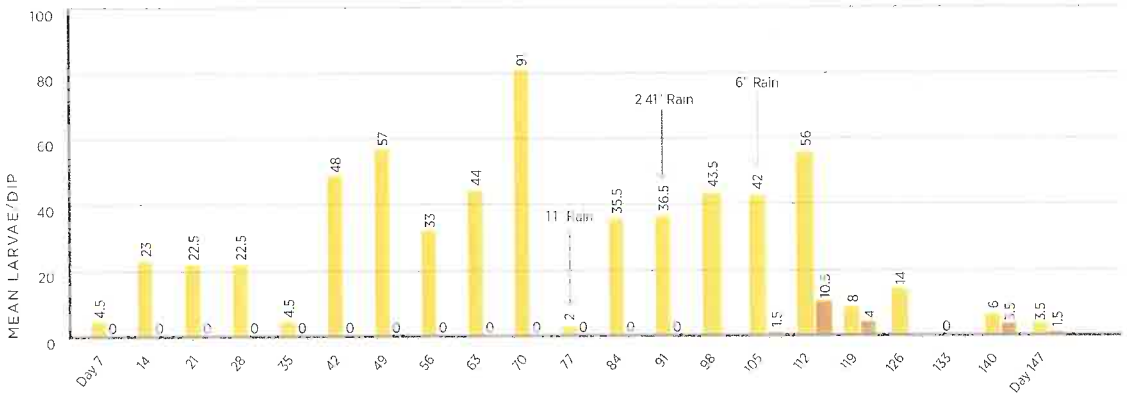
Habitat: Catch Basins/*Cx. restuans* - *pipiens*
Location: Illinois, 2008



Key:
Unt
Trt

Natular XRT

Habitat: Catch Basin/*Cx. pipiens*
Location: Illinois, 2008

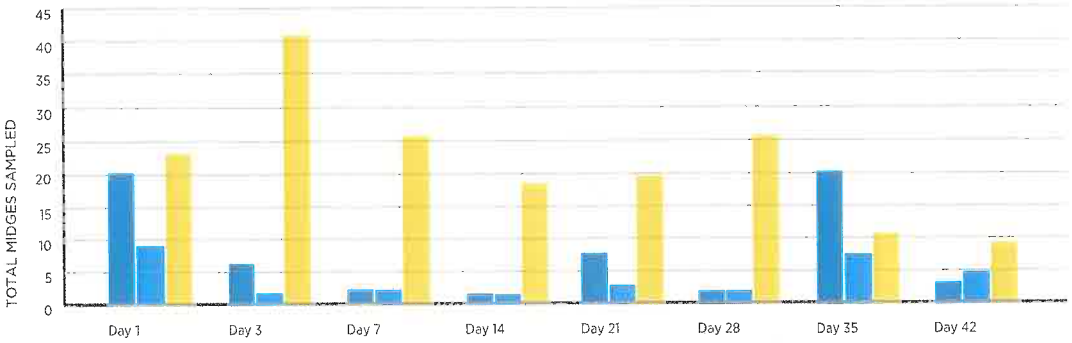


RESULTS

Key:
- Natular 12 lb/Acre
- Natular 12.5 lb/Acre
- Control

Natular G30

Habitat: Sample from Benthic Soils, Lake Monroe
Rate: 12 lb/Acre and 12 5 lb/Acre
Location: Lake Monroe Florida, Volusia County, 2010
Species: Non-Biting Midge: *Glyptotendipes paripes and Chironomus crassicaudatus*

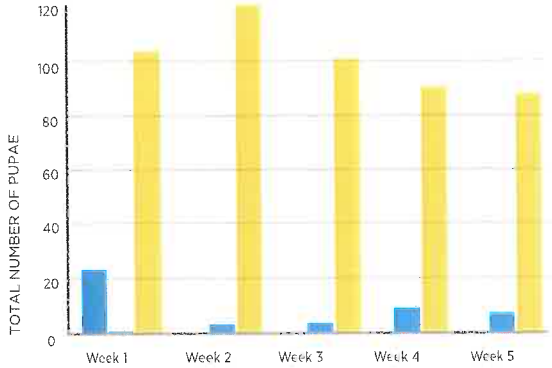


*Data provided by Edward D. Northey, Environmental Specialist, Volusia County MC, FL

Key:
- Natular T30
- Natular G30
- Control

Natular T30 and Natular G30

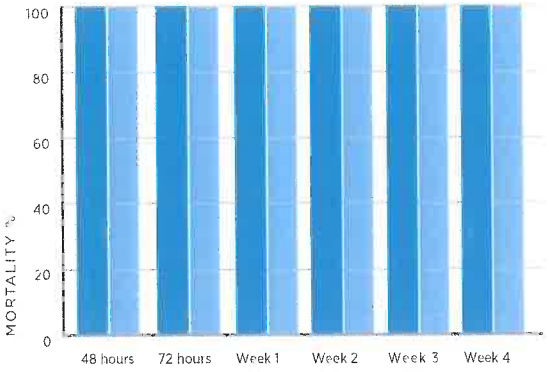
Location: Kenya Medical Research Institute, Kisumu, Kenya, 2010
Species: *Anopheles gambiae*
Large Simulated Barrow Pit Study



Key:
- Natular 5 lb/Acre
- Natular 10 lb/Acre

Natular G30

Habitat: Wetlands
Rate: 10lb/A and 5lb/A
Location: Washoe County, Nevada, 2009
Species: *Cs. morsitans, Cx. tarsalis*



FREQUENTLY ASKED QUESTIONS

Q: What is the active ingredient in Natular® larvicides?
A: Spinosad. It is a naturally derived active ingredient produced during fermentation by the soil organism, *Saccharopolyspora spinosa*. The natural metabolites produced during the fermentation process were termed "spinosyns". Spinosad is the collective term for the two most prominent and most active compounds in the fermentation broth (spinosyn A and spinosyn D). Hence the name "Spinosad".

Q: How is the active ingredient manufactured?
A: Spinosad is produced in a state-of-the-art fermentation facility in the United States, using natural feed-stocks to maintain the fermentation process

Q: Is spinosad new?
A: No. Spinosad's first global registration was in 1996. Today it's used on more than 250 crops and in consumer and animal health uses in over 85 countries. Although Natular larvicides are the first public health usage of the active.

Q: How does the active ingredient in Natular formulations control mosquito larvae?
A: Spinosad has a novel mode of action; it alters the function of insect nicotinic acetylcholine receptors in a unique manner. Ultimately paralysis sets in upon ingestion and contact and the mosquito larvae don't recover.

Q: Are Natular formulations suitable for use in organic agriculture?
A: All domestic formulations of Natular are listed by the Organic Materials Review Institute (OMRI) for use in and around organic agriculture.

Q: What does Group 5 Insecticide mean on the Natular label?
A: Group 5 is a designation by IRAC (Insect Resistance Action Committee), which is a global industry organization that promotes the development of insecticide resistance management strategies to maintain efficacy and support sustainable agriculture and improved public health. Each group has a distinctly different mode of action. Spinosad is the only active ingredient in Group 5 used for mosquito control. The benefit of this is that it has no cross-resistance with existing products – making Natular an excellent option for resistance management.

Q: What are the inert ingredients in Natular?
A: All inert components in domestic Natular formulations are included in EPA's list of Minimal Risk Inert Ingredients. Inerts are non-synthetic (natural) or are synthetic components which do not contribute to mammalian or aquatic toxicity

Q: What impact does spinosad have on non-targets?
A: Spinosad is of low acute and chronic toxicity to a wide range of non-target species. Under laboratory conditions, spinosad is toxic to some aquatic invertebrates, primarily upon chronic exposure. Fortunately, the rapid degradation of spinosad in natural aquatic environments prevents the long-term exposure that would be needed for these effects to occur in real world situations.

Q: How effective is Natular in an open / floodwater habitats with sunlight (Aedes vexans)?
A: Excellent, based on numerous cooperator and university trials.

Q: Do Natular larvicides control all of the important mosquito species?
A: Natular formulations have been tested on twenty of the most common vector and nuisance mosquito species and spinosad is effective against all of them. Given the fact that spinosad is a new active ingredient and has a completely unique mode of action; we expect to see consistent performance across all species.

Q: How do Natular™ formulations perform in habitats containing high organic matter?
A: We have seen excellent results in habitats with high concentrations of organic debris with Natular formulations, e.g. polluted water, sewage lagoons, and waters with high concentrations of leaf litter or other organic debris.

Q: How have Natular products performed in catch basins?

A: Both the 30-day Natular T30 and Natular XRT have performed exceptionally well in catch basins – even in the face of significant rain events as well as wet/dry cycles. The 30-day Natular T30 provides 30 days of control, while the XRT has consistently reached full season limits with control up to 180 days.

Q: How does varying amounts of sunlight affect the performance of Natular products?

A: Natular formulations were developed specifically for use in natural mosquito habitats, with single or multi-brood control objectives in mind. To date we have seen very uniform control levels regardless of sunlight intensity, and consistent with the labeled control claim of each Natular formulation.

Q: What about resistance?

A: The active ingredient in Natular products, spinosad, has not previously been used to control mosquitoes, hence there is no resistance to it. Spinosad is in a unique chemical class different from any other current products used in mosquito control, so there is no cross-resistance. Clarke will implement a resistance management program. To manage resistance, Clarke will steward and monitor the applications of these products to ensure consistent use according to label directions.

Q: What is the ecological toxicity of the Natular formulations?

A: Spinosad was registered under the US EPA Reduced Risk program and has favorable environmental characteristics compared to other mosquito larvicides. The active ingredient in Natular larvicides, spinosad, is well known to present a relatively low risk to beneficial and non-target insects compared to other broad-spectrum, insecticide products. Spinosad is not acutely toxic to terrestrial birds, wildlife, or to fish and most aquatic invertebrates. Extensive field experience indicates that spinosad's overall impact on beneficial insects is generally limited and transitory, and spinosad fits well into Integrated Pest Management (IPM) programs.

Q: What impact does spinosad have on non-targets?

A: Spinosad is of low acute and chronic toxicity to a wide range of non-target species. Under laboratory conditions, spinosad is toxic to some aquatic invertebrates, primarily upon chronic exposure. The rapid degradation of spinosad in natural aquatic environments prevents the long-term exposure to levels needed for these effects to occur in real world situations. Indeed, field studies indicate that effect on non-target species is mitigated by virtue of low application rates and rapid dissipation of spinosad.

Q: How do Natular products affect honey bees?

A: Field testing has demonstrated that once liquid spray residues have been allowed to dry for up to 3 hours that spinosad is not harmful to foraging honeybees and bumblebees. Spinosad has been used extensively in more than 85 countries with over 250 registered crop uses since its first launch in agriculture without any reported adverse effects on bees. This would be applicable ONLY TO THE LIQUID formulation. Granular and tablet formulations will not pose a bee hazard

Q: Why are Natular formulations good rotational products?

A: Natular formulations are the new standard in larvicide control and are excellent as rotational products because they contain a new active ingredient with a distinctly different mode of action. Natular products are a key component in rotational programs for larvicide control. Rotation will help preserve the continued use of existing products.

Q: Is Natular's active ingredient toxic to mammals?

A: Mammals rapidly metabolize spinosad and any by-products are excreted. So spinosad has a very favorable mammalian toxicity profile:

- Low acute tox for both technical and end-use formulations
- No reproductive effects, not a teratogen
- Negative in genotoxicity tests
- Not a carcinogen
- No endocrine effects

Clarke

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Clarke is a global environmental products and services company. Each year, Clarke helps make communities around the world more livable, safe and comfortable by pioneering, developing and delivering environmentally responsible disease prevention and habitat management solutions. In 2008, Clarke founded The Clarke Cares Foundation, a non-profit created to provide disease prevention support for communities with critical needs.

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NPDES Permit No. ILG87

Illinois Environmental Protection Agency
Division of Water Pollution Control
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Springfield, Illinois 62794-9276
www.epa.illinois.gov

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

General NPDES Permit
For
Pesticide Application Point Source Discharges

Expiration Date: October 31, 2021

Issue Date: October 14, 2016

Effective Date: November 1, 2016

In compliance with the provisions of the Illinois Environmental Protection Act, the Illinois Pollution Control Board and Rules and Regulations (35 Ill. Adm. Code, Subtitle C, Chapter 1), and the Clean Water Act, and the regulations thereunder the following discharges are authorized by this permit in accordance with the conditions and attachments herein.

This permit is available to operators who discharge to waters of the State from the application of biological pesticides or chemical pesticides that leave a residue, when the pesticide application is for one of the following pesticide use patterns:

1. Mosquito and Other Insect Pest Control
2. Weed and Algae Pest Control
3. Animal Pest Control
4. Forested Areas Pest Control
5. Other Pest Control Activities

Discharges may be authorized to any surface water of the State excluding waters identified as impaired by that pesticide or its degradates. This permit does not authorize discharges, to any waters of the State which are designated as a outstanding resource water by the Agency in accordance with 35 Ill. Adm. Code 302.105(b).

To receive authorization to discharge under this general permit, an operator must submit the proper application form to the Illinois Environmental Protection Agency. Authorization, if granted, will be by letter and include a copy of this permit.

Alan Keller

Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

Table of Contents

1.0 Coverage under this Permit

This permit covers any operator that meets the eligibility requirements identified in Part 1.1 and if so required, submits a Notice of Intent (NOI) in accordance with Part 1.2.

For the purpose of this permit, all operators are defined in Appendix A to be:

a. The person(s) with control over the hiring of a contract applicator, or making the decision to perform pesticide applications, including the ability to modify those decisions, that results in a discharge to waters of the State, and/or

b. The person(s) who performs the application of pesticides or who has day-to-day control of the pesticide application, that results in a discharge to waters of the State.

If the operator under part "a" of the definition is different than the operator actually performing the application of pesticides, only one of the two is required to obtain coverage under this permit.

This permit is not applicable for general use or restricted use pesticides that under Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), are not registered for application to or use in waters of the State.

Pursuant to section 12(f) of the Illinois Environmental Protection Act, no permit shall be required for any discharge for which a permit is not required under the Federal Water Pollution Control Act.

1.1 Eligibility

1.1.1 Activities Covered

This permit is available to operators who discharge to waters of the State from the application of (1) biological pesticides or (2) chemical pesticides that leave a residue (collectively called pesticides), when the pesticide application is for one of the following pesticide use patterns:

1. **Mosquito and Other Insect Pest Control** – to control public health/nuisance and other insect pests that develop or are present during a portion of their life cycle in or above standing or flowing water. Public health/nuisance and other insect pests in this use category include but are not limited to mosquitoes and black flies.

2. **Weed and Algae Pest Control** – to control weeds, algae, and pathogens that are pests in water and at water's edge, include but are not limited to ditches and/or canals.

3. **Animal Pest Control** – to control animal pests in water and at water's edge. Animal pests in this use category include, but are not limited to fish, lampreys, insects, mollusks, and pathogens.

4. **Forested Areas Pest Control** – application of a pesticide to a forested area to control the population of a pest species, (e.g., insect or pathogen) where, to target the pests effectively, a portion of the pesticide unavoidably will be applied over and deposited to water.

5. **Other Pest Control Activities** – any application of pesticides not identified above, which leave a residue, to waters of the State or at the water's edge.

A portion of every application of a pesticide over a water of the State will fall directly into the water of the State thereby requiring coverage under an NPDES permit. Any person who wishes to contest this determination must submit scientific data to prove that no quantity of the pesticide falls into a water of the State. A permit may not be necessary if IEPA receives scientific information which convinces the Agency that no portion of a chemical pesticide applied over a water of the State will fall into the water of the State.

A portion of every application of a pesticide into a water of the State will leave a residue in the water of the State thereby requiring coverage under an NPDES permit. Any person who wishes to dispute this determination must submit scientific data to prove that no quantity of the pesticide will remain as a residue in a water of the State. This information should include data to show what level of the pesticide can be detected in water, and at what level in

water the pesticide provides a pesticidal benefit. Such data should address the properties of the chemical pesticide under different water conditions (e.g., different pH, organic content, temperature, depth, etc.) that might affect the pesticide's properties. A permit may not be necessary if IEPA receives scientific information that convinces the Agency that a chemical pesticide applied into a water of the State will not remain as a residue in the water of the State.

1.1.2 Limitations on Coverage

1.1.2.1 Discharges to Water Quality Impaired Waters

Operators are not eligible for coverage under this permit for any discharges from a pesticide application to waters of the State if the water is identified as impaired by a substance which either is an active ingredient in that pesticide or is a degradate of such an active ingredient. For purposes of this permit, impaired waters are those that have been identified by the State pursuant to Section 303(d) of the Clean Water Act (CWA) as not meeting applicable State water quality standards or not meeting the intended use of the water body. Impaired waters for the purposes of this permit may include both waters with USEPA-approved or USEPA-established Total Maximum Daily Loads (TMDLs) and waters for which USEPA has not yet approved or established a TMDL. A list of the 303(d) waters is available on the Internet at www.epa.illinois.gov/topics/forms/water-permits/pesticide/303d-list/index. If a discharge from a pesticide application would not be eligible under this permit because the water is listed as impaired for that specific pesticide, but there is evidence that shows the water is no longer impaired, operators may submit this information to IEPA and request that coverage be allowed under this permit.

1.1.2.2 Discharges to Waters Designated as Outstanding Resource Waters for Antidegradation Purposes

Operators are not eligible for coverage under this permit for discharges from a pesticide application to waters designated by the State as Outstanding Resource Waters for anti-degradation purposes under 35 Ill. Adm. Code 302.105(b).

1.1.2.3 Discharges Currently or Previously Covered by another Permit

Pesticide discharges are not eligible for coverage under this permit if any of the following circumstances apply:

a. The discharge is covered by another NPDES permit, or

b. The discharge was included in a permit that in the past 5 years has been or is in the process of being denied, terminated, or revoked by IEPA (this does not apply to the routine reissuance of permits every 5 years).

1.2 Authorization to Discharge under This Permit

1.2.1 How to Obtain Authorization

To obtain authorization under this permit, an operator must:

a. Meet the eligibility requirements identified in Part 1.1, and

b. Submit a complete and accurate Notice of Intent (NOI) consistent with the requirements of Parts 1.2.2 and 1.2.3.

1.2.2 Operators Required to Submit a Notice of Intent

The following operators are required to submit a Notice of Intent to obtain coverage under this general permit for discharges to waters of the State resulting from the application of pesticides:

a. Person(s), group, or entity with control over the hiring of a contract applicator, or making the decision to perform pesticide application, that will result in a discharge to waters of the State; or

b. Person(s), group, or entity performing the application of pesticides, that will result in a discharge to waters of the State.

Operators must submit an NOI to IEPA electronically. Operators should refer to www.epa.illinois.gov/topics/forms/water-permits/pesticide/index for instruction on submitting the NOI. IEPA will post on the Internet, at www.epa.illinois.gov/topics/forms/water-permits/pesticide/notices/index, all NOIs received. Late NOIs will be accepted, but authorization to discharge will not be retroactive. NOI submissions must be in accordance with the deadlines in Part 1.2.3.

Coverage will be available for the duration of the permit for operators who file an NOI, including the operator's employees, contractors, subcontractors, and other agents, for all activities identified on the NOI unless coverage is terminated pursuant to Parts 1.2.5 or 1.3. If a submitted NOI is not timely, accurate, or complete, then any employee, contractor, subcontractor or other entity that discharges without the required NOI is not covered by this permit.

The NOI form is available on the Internet at www.epa.illinois.gov/Assets/iepa/forms/water-quality/wastewater/pesticide/noi.pdf.

1.2.3 Discharge Authorization Date

Unless modified, exempted, or stayed by legislative action or court order, discharges to waters of the State as a result of pesticide applications must be authorized under an NPDES permit. Operators that are eligible for coverage under Part 1.1 are authorized to discharge under this permit consistent with the NOI submission and the Table 1 below.

Table 1. Original NOI Submittal Deadlines and Discharge Authorization Date

Category	NOI Submittal Deadline	Discharge Authorization Date
Operators are required to submit an NOI prior to commencement of discharge.	At least 14 days prior to commencement of discharge.	No earlier than 14 days after IEPA posts on the Internet the receipt of the complete and accurate NOI.
Operators commencing discharge in response to a declared pest emergency situation as defined in Appendix A.	No later than 30 days after commencement of discharge.[1]	Immediately, for activities conducted in response to declared pest emergency situation.

To remain authorized, all operators must submit NOI changes, as necessary, consistent with Table 2 below.

Table 2. NOI Change of Information Submittal Deadlines and Discharge Authorization Date

Category	NOI Submittal Deadline	Discharge Authorization Date
Operators requiring permit coverage for a new use pattern or for a treatment area not within the pest management area, previously identified on a NOI submitted to IEPA.	At least 14 days prior to commencement of discharge in that newly identified treatment area.	No earlier than 14 days after IEPA posts on the Internet the receipt of the complete and accurate NOI.
Operators requiring permit coverage for a new use pattern or for a treatment area in response to a declared pest emergency situation not within the pest management area, previously identified on a NOI submitted to IEPA.	No later than 30 days after commencement of discharge.[1]	Immediately, for activities conducted in response to declared pest emergency situation.

[1] In the event that a discharge occurs prior to submitting an NOI, the operator must comply with all other requirements of this permit immediately.

Based on a review of the NOI or other information, IEPA may determine that additional technology-based and/or water quality-based effluent limitations are necessary, or deny coverage under this permit and require submission of an application for an individual NPDES permit, as detailed in Part 1.3.

Unless notified by the Agency to submit additional information, operators who submit an NOI in accordance with the requirements of this permit are authorized to discharge under the terms and conditions of this permit 30 days after the date the NOI is received by the Agency.

1.2.4 Continuation of this Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 CFR 122.6 and 35 Ill. Adm. Code, Subtitle C, Chapter I and remain in force and effect. If a permittee was authorized to discharge under this permit prior to the expiration date, any discharges authorized under this permit will automatically remain covered by this permit until the earliest of the following:

a. A permittee is authorized for coverage under a reissued permit or a replacement of this permit, following the timely and appropriate submittal of a complete NOI requesting authorization to discharge under the new permit and in compliance with the requirements of the NOI;

b. The permittee submits a Notice of Termination (NOT) and that notice is processed consistent with Part 1.2.5.1;

c. An individual NPDES permit for a discharge resulting from application of a pesticide that would otherwise be covered under this permit is issued or denied;

d. IEPA issues a formal permit decision not to reissue this general permit, at which time IEPA will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease when coverage under another permit is granted/authorized; or

e. IEPA has informed the permittee that the discharge is no longer covered under this permit.

1.2.5 Terminating Coverage

1.2.5.1 Submitting a Notice of Termination

To terminate permit coverage, a permittee must submit a complete and accurate Notice of Termination. Permittees must submit the Notice of Termination electronically. The authorization to discharge under this permit is terminated the day that a complete Notice of Termination is processed. If a permittee submits a Notice of Termination without meeting one or more of the conditions identified in Part 1.2.5.2, the Notice of Termination is not valid. Permittees are responsible for complying with the terms of this permit until authorization is terminated. If required to submit annual reports pursuant to Part 7, the permittee must file an annual report for the portion of the year up through the date of termination. The annual report shall be submitted with the completed Notice of Termination.

Permittees may not terminate coverage under this permit and reapply in order to remain below the annual treatment area thresholds.

The NOT form is available on the Internet at www.epa.state.il.us/water/permits/pesticide/forms/not.pdf.

1.2.5.2 When to Submit a Notice of Termination

A permittee must submit a Notice of Termination within 30 days after one or more of the following conditions have been met:

a. The permittee has ceased all discharges from the application of pesticides for which permit coverage was obtained and the permittee does not expect to discharge during the remainder of the permit term for any of the use patterns as identified in Part 1.1.1; or

b. The permittee has obtained coverage under an individual NPDES permit or an alternative NPDES general permit for all discharges required to be covered by an NPDES permit, unless the permittee obtained coverage consistent with Part 1.3, in which case coverage under this permit will terminate automatically.

1.2.6 Transfer of Permit Coverage

If a new operator takes over responsibility of pest control activities covered under an existing NOI, the new operator must submit the following:

a. A new NOI for the new operator; and

b. A letter from the existing permittee referencing the existing NPDES permit number, date of coverage, and requesting transfer of the permit.

1.3 Alternative Permits

1.3.1 Requiring Coverage under an Alternative Permit

In accordance with 40 CFR 122.64, 40 CFR 124.5, and 35 Ill. Adm. Code, Subtitle C, Chapter I, IEPA may require operators to apply for and/or obtain authorization to discharge under either an individual NPDES permit or an alternative NPDES general permit.

If IEPA requires an operator to apply for an individual NPDES permit, IEPA will notify the operator in writing that a permit application is required. This notification will include a brief statement of the reasons for the decision and will provide application information. In addition, for permittees whose discharges are authorized under this permit, any notice will set a deadline to file the permit application and will include a statement that on the effective date of the individual NPDES permit, coverage under this general permit will terminate. IEPA may grant additional time to submit the application if the operator submits a request setting forth reasonable grounds for additional time. If covered under this permit and the permittee fails to submit an individual NPDES permit application as required by IEPA, the applicability of this permit to such permittee is terminated at the end of the day specified by IEPA as the deadline for application submittal. IEPA may take enforcement action for any unpermitted discharge or violation of any permit requirement.

1.3.2 Operator Requesting Coverage under an Alternative Permit

If an operator does not want to be covered by this general permit, but needs permit coverage, the operator can apply for an individual NPDES permit. In such a case, the operator must submit an individual permit application in accordance with the requirements of 40 CFR 122.26(c)(1)(ii), with reasons supporting the request, to IEPA. The request may be granted by issuance of an individual NPDES permit or authorization of coverage under an alternative NPDES general permit.

When an individual NPDES permit is issued, or the operator is authorized under an alternative NPDES general permit to discharge a pollutant to waters of the State as a result of a pesticide application, authorization to discharge under this permit is terminated on the effective date of the individual NPDES permit or the date of authorization of coverage under the alternative NPDES general permit.

1.4 Severability

Invalidation of a portion of this permit does not render the whole permit invalid. IEPA's intent is that the permit will remain in effect to the extent possible; if any part of this permit is invalidated, the remaining parts of the permit will remain in effect unless IEPA issues a written statement stating otherwise.

1.5 Other Federal and State Laws

Permittees must comply with all other applicable federal and state laws and regulations that pertain to application of pesticides. For example, this permit does not relieve the permittee of the responsibility of complying with the requirements or provisions of the Federal Insecticide, Fungicide, and Rodenticide Act and its implementing regulations to use registered pesticides consistent with the product's labeling. In fact, applications in violation of certain FIFRA requirements could also be a violation of this permit and therefore a violation of the CWA (e.g. exceeding label application rates). Additionally, other laws and regulations might apply to certain activities that are also covered under this permit (e.g., United States Coast Guard regulations).

1.6 Endangered Species Compliance

The location of the treatment areas must be submitted to the Illinois Department of Natural Resources (IDNR) EcoCAT website to determine if protected natural resources are in the vicinity, www.dnr.illinois.gov/ecopublic/. Consultation with the Department is required under the Illinois Endangered Species Protection Act, 520 ILCS

10/11(b) and the Illinois Natural Areas Preservation Act, 525 ILCS 30/17, for all permittees covered by this permit unless exempted below.

The following applications are exempt from consultation unless there will be an adverse impact to a listed species or its essential habitat or to a Natural Area:

1. Per consultation regulations (17 Ill. Adm. Code, Part 1075) – annual, routine cultivation of existing agricultural lands; and maintenance of existing lawns, yards and ornamental plantings.

2. Per a Memorandum of Understanding between IEPA and IDNR – microbial larvicide applied to catch basins and storm sewers.

1.7 Reopener Clause

If there is evidence indicating potential or realized adverse impacts on water quality due to any pesticide discharge covered by this permit, the permittee may be required to obtain an individual permit or an alternative general permit in accordance with Section 1.3.1 of this permit or the permit may be modified to include different limitations and/or requirements.

Permit modification or revocation will be conducted according to provisions of 35 Ill. Adm. Code, Subtitle C, Chapter I and the provisions of 40 CFR 122.62, 122.63, 122.64, and 124.5 and any other applicable public participations procedures.

The Agency will reopen and modify this permit under the following circumstances:

a. The USEPA amends its regulations concerning public participation;

b. A court of competent jurisdiction binding in the State of Illinois or the 7th Circuit issues an order necessitating a modification of public participation for general permits; or

c. To incorporate federally required modifications to the substantive requirements of this permit.

2.0 Technology-Based Effluent Limitations

This part includes technology-based effluent limitations applicable to all permittees for any discharge authorized under this permit, with compliance required upon beginning such discharge. If the permittee is not the applicator, the technology-based effluent limitations are also applicable to the contract applicator.

If a permittee's discharge of pollutants results from the application of pesticides that is being used solely for the purpose of "pesticide research and development," as defined in Appendix A, the permittee must use such pesticide consistent with any applicable research plan and experimental use permit.

As stated in Part 1.5, this permit required all permittees to comply with other applicable federal or state laws and regulations that pertain to application of pesticides by the permittee.

2.1 Level 1: Technology- Based Effluent Limitations

All permittees must meet Level 1 of the technology-based effluent limitations in Part 2.1 to minimize the discharge of pesticides to waters of the State from the application of pesticides, through the use of Pest Management Measures, as defined in Appendix A. If the permittee is not the applicator, the Level 1 technology-based effluent limitations are also applicable to the contract applicator.

2.1.1 Use only the amount of pesticide and frequency of pesticide application necessary to control the target pest, using equipment and application procedures appropriate for this task.

2.1.2 Maintain pesticide application equipment in proper operating condition, including the requirement to calibrate, clean, and repair such equipment and prevent leaks, spills, or other unintended discharges.

2.1.3 Assess weather conditions (e.g. temperature, precipitation and wind speed) in the treatment area to ensure application is consistent with all applicable federal and state requirements.

2.2 Level 2: Technology-Based Effluent Limitations

Level 2 of the technology-based effluent limitations applies to permittees which exceed one or more of the annual (i.e. calendar year) treatment area threshold(s) listed in Table 3 below, as defined in Appendix A. If the permittee is not the applicator, the Level 2 technology-based effluent limitations are also applicable to the contract applicator.

Table 3. Annual Treatment Area Threshold

Section	Pesticide Use	Annual Threshold
2.2.1	Mosquito and Other Insect Pest Control	
	- Adult Mosquitoes and Other Insect Pests	6,400 acres of treatment area
	- Mosquito and Other Insect Aquatic Larviciding	80 acres of treatment area (i.e. surface area)
2.2.2	Weed and Algae Pest Control	
	- In Water	80 acres of treatment area (i.e. surface area)
	- At Water's Edge	20 linear miles of treatment area
2.2.3	Animal Pest Control	
	- In Water	80 acres of treatment area (i.e. surface area)
	- At Water's Edge	20 linear miles of treatment area
2.2.4	Forested Areas Pest Control	6,400 acres of treatment area
2.2.5	Other Pest Control Activities	
	- Ground or Aerial	6,400 acres of treatment area
	- In Water	80 acres of treatment area (i.e. surface area)
	- At Water's Edge	20 linear miles of treatment area

For calculating the annual treatment area, count each treatment area only once, regardless of the number of pesticide application activities when applying with the same pesticide product. For example, applying pesticides 3 times a year to the same 3,000 acre site using the same pesticide product, the annual treatment area should be counted as 3,000 acres. If a different pesticide product is applied to the same treatment area, these activities would be counted as separate treatment areas for each different pesticide product. For example, applying pesticides 3 times a year to the same 3,000 acre site using a different pesticide product each time the annual treatment area should be counted as 9,000 acres.

For linear features (e.g., a canal or ditch) use the length of the linear feature whether treating in or adjacent to the feature. For example, when treating the bank on one side of a 10 mile long ditch, banks on both sides of the ditch, and/or water in the ditch, the total treatment area is 10 miles.

2.2.1 Mosquito and Other Insect Pest Control

This part applies to discharges from the application of pesticides for mosquito and other insect pest control as defined in Part 1.1.1.

a. Identify the Problem

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must do the following for each pest management area, as defined in Appendix A:

1. Establish densities for larval and adult mosquitoes or other insect pest populations or identify environmental condition(s), either current or based on historical data, to serve as action threshold(s) for implementing Pest Management Measures;

2. Identify target pest(s) to develop Pest Management Measures based on developmental and behavioral considerations for each pest;

3. Identify known breeding sites for source reduction, larval control program, and habitat management;

4. Analyze existing surveillance data to identify new or unidentified sources of mosquito or other insect pest problems as well as sites that have recurring pest problems; and

5. In the event there is no data for the pest management area in the past calendar year, use other available data as appropriate to meet the permit conditions of Part 2.2.1.a.

b. Pest Management Options

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must select and implement efficient and effective means of Pest Management Measures that minimize discharges resulting from application of pesticides to control mosquitoes or other insect pests. In developing the Pest Management Measures for each pest management area, the permittee must evaluate the following management options, including a combination of these management options, considering impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical or physical methods
4. Cultural methods
5. Biological control agents
6. Pesticides

c. Pesticide Use

If a pesticide is selected to manage mosquitoes or other insect pests and application of the pesticide will result in a discharge to waters of the State, the permittee must:

1. Conduct larval and/or adult surveillance in an area that is representative of the pest problem or evaluate existing larval surveillance data, environmental conditions, or data from adjacent areas prior to each pesticide application to assess the pest management area and to determine when action threshold(s) is met;

2. Reduce the impact on the environment and on non-target organisms by applying the pesticide only when the action threshold(s) has been met;

3. In situations or locations where practicable and feasible for effective control, use larvicides as a preferred pesticide for mosquito or other insect pest control when the larval action threshold(s) has been met; and

4. In situations or locations where larvicide use is not practicable or feasible for efficacious control, use adulticides for mosquito or other insect pest control when the adult action threshold(s) has been met.

2.2.2 Weed and Algae Pest Control

This part applies to discharges from the application of pesticides for weed, algae, and pathogens as defined in Part 1.1.1.

a. Identify the Problem

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must do the following for each pest management area, as defined in Appendix A:

1. Identify areas with pest problems and characterize the extent of the problems, including, for example, water use goals not attained (e.g. wildlife habitat, fisheries, vegetation, and recreation);

2. Identify target pest(s);

3. Identify possible factors causing or contributing to pest problem (e.g., nutrients, invasive species, etc);

4. Establish any pest-specific and site-specific action threshold(s), as defined in Appendix A , for implementing Part 2.2.2.b; and

5. In the event there is no data for the pest management area in the past calendar year, use other available data as appropriate to meet the permit conditions of Part 2.2.2.a.

b. Pest Management Options

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must select and implement efficient and effective means of Pest Management Measures that minimize discharges resulting from application of pesticides to control pests. In developing the Pest Management Measures for each pest management area, the permittee must evaluate the following management options, including a combination of these management options, considering impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical or physical methods
4. Cultural methods
5. Biological control agents
6. Pesticides

c. Pesticide Use

If a pesticide is selected to manage pests and application of the pesticide will result in a discharge to waters of the State, the permittee must:

1. Conduct surveillance in an area that is representative of the pest problem prior to each pesticide application to assess the pest management area and to determine when the action threshold(s) is met; and

2. Reduce the impact on the environment and non-target organisms by applying the pesticide only when the action threshold(s) has been met.

2.2.3 Animal Pest Control

This part applies to discharges from the application of pesticides for control of animal pests as defined in Part 1.1.1.

a. Identify the Problem

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must do the following for each pest management area, as defined in Appendix A:

1. Identify areas with pest problems and characterize the extent of the problems, including, for example, water use goals not attained (e.g. wildlife habitat, fisheries, vegetation, and recreation);

2. Identify target pest(s);

3. Identify possible factors causing or contributing to the problem (e.g., nutrients, invasive species);

4. Establish any pest-specific and site-specific action threshold(s), as defined in Appendix A, for implementing Part 2.2.3.b; and

5. In the event there is no data for the pest management area in the past calendar year, use other available data as appropriate to meet the permit conditions of Part 2.2.3.a.

b. Pest Management Options

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each year thereafter prior to the first pesticide application during that calendar year, the permittee must select and implement efficient and effective means of Pest Management Measures that minimize discharges resulting from application of pesticides to control pests. In developing the Pest Management Measures for each pest management area, the permittee must evaluate the following management options, including a combination of these management options, considering impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical or physical methods
4. Biological control agents
5. Pesticides

c. Pesticide Use

If a pesticide is selected to manage pests and application of the pesticide will result in a discharge to waters of the State, the permittee must:

1. Conduct surveillance in an area that is representative of pest problem prior to each application to assess the pest management area and to determine when the action threshold(s) is met:; and

2. Reduce the impact on the environment and non-target organisms by evaluating site restrictions, application timing, and application method in addition to applying the pesticide only when the action threshold(s) has been met.

2.2.4 Forested Area Pest Control

This part applies to discharges from the application of pesticides for forested area pest control as defined in Part 1.1.1.

a. Identify the Problem

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application in that calendar year, the permittee must do the following for each pest management area, as defined in Appendix A:

1. Establish any pest-specific and site-specific action threshold(s), as defined in Appendix A, for implementing Part 2.2.4.b;

2. Identify target pest(s) to develop a Pest Management Measures based on developmental and behavioral considerations for each pest;

3. Identify current distribution of the target pest and assess potential distribution in the absence of Pest Management Measures; and

4. In the event there is no data for the pest management area in the past calendar year, use other available data as appropriate to meet the permit conditions of Part 2.2.4.a.

b. Pest Management Options

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must select and implement efficient and effective means of Pest Management Measures that minimize discharges resulting from application of pesticides to control pests. In developing the Pest Management Measures for each pest management area, the permittee must evaluate the following management options, including a

combination of these management options, considering impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical/physical methods
4. Cultural methods
5. Biological control agents
6. Pesticides

c. Pesticide Use

If a pesticide is selected to manage forestry pests and application of the pesticide will result in a discharge to waters of the State, the permittee must:

1. Conduct surveillance in an area that is representative of the pest problem prior to each application to assess the pest management area and to determine when the pest action threshold(s) is met;

2. Reduce the impact on the environment and non-target organisms by evaluating the restrictions, application timing, and application methods in addition to applying the pesticide only when the action threshold(s) have been met; and

3. Evaluate using pesticides against the most susceptible developmental stage.

2.2.5 Other Pest Control Activities

This part applies to discharges from the application of pesticides not identified in Parts 2.2.1, 2.2.2, 2.2.3, or 2.2.4.

a. Identify the Problem

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application in that calendar year, the permittee must do the following for each pest management area, as defined in Appendix A:

1. Establish any pest-specific and site-specific action threshold(s), as defined in Appendix A, for implementing Part 2.2.5.b;

2. Identify target pest(s) to develop Pest Management Measures based on developmental and behavioral considerations for each pest;

3. Identify current distribution of the target pest and assess potential distribution in the absence of Pest Management Measures; and

4. In the event there is no data for the pest management area in the past calendar year, use other available data as appropriate to meet the permit conditions of Part 2.2.5.a.

b. Pest Management Options

Prior to the first pesticide application covered under this permit that will result in a discharge to waters of the State, and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the permittee must select and implement efficient and effective means of Pest Management Measures that minimize discharges resulting from application of pesticides to control pests. In developing the Pest Management Measures for each pest management area, the permittee must evaluate the following management options, including a combination of these management options, considering impacts to water quality, impacts to non-target organisms, feasibility, and cost effectiveness:

1. No action
2. Prevention
3. Mechanical/physical methods

4. Cultural methods
5. Biological control agents
6. Pesticides

c. Pesticide Use

If a pesticide is selected to manage other activities not covered under the other four use patterns and application of the pesticide will result in a discharge to waters of the State, the permittee must:

1. Conduct surveillance in an area that is representative of the pest problem prior to each application to assess the pest management area and to determine when the pest action threshold(s) is met;

2. Reduce the impact on the environment and non-target organisms by evaluating the restrictions, application timing, and application methods in addition to applying the pesticide only when the action threshold(s) have been met; and

3. Evaluate using pesticides against the most susceptible developmental stage.

3.0 Water Quality-Based Effluent Limitations

All permittees must control discharges as necessary to meet applicable numeric and narrative State water quality standards, for any discharge authorized under this permit, with compliance required upon the beginning of such discharge. Discharges covered by this permit, alone or in combination with other sources, shall not cause a violation of any applicable water quality standards outlined in 35 Ill. Adm. Code 302, in light of the provisions of 35 Ill. Adm. Code 302.210(g).

If at any time a permittee becomes aware (e.g., through self-monitoring or by notification from the State), or IEPA determines, that the discharge causes or contributes to an excursion of applicable water quality standards, the permittee must take corrective action as required in Part 6, up to and including the ceasing of the discharge, if necessary.

4.0 Monitoring

4.1 Visual Monitoring Requirements

During any pesticide application or post-application surveillance of any pesticide application with discharges authorized under this permit, all permittees must, when considerations for safety and feasibility allow and while observing reentry periods for pesticides application, visually assess the area to and around where pesticides are applied for possible and observable adverse incidents, as defined in Appendix A, caused by application of pesticides, including the unanticipated death or distress of non-target organisms and disruption of wildlife habitat, recreational or municipal water use.

If the permittee is not the applicator, this section is also applicable to the contract applicator.

5.0 Pesticide Discharge Management Plan

Permittees which exceed one or more of the annual treatment area thresholds listed in Table 3 must prepare and submit a Pesticide Discharge Management Plan (PDMP). This section does not apply to the following:

1. Any application made in response to a declared pest emergency situation, as defined in Appendix A.

2. Permittees who meet the definition of a small entity, as defined in Appendix A.

3. Permittees conducting pesticide application activities pursuant to the Vector Control Act (410 ILCS 95) which are funded by, conducted in accordance with, or under the supervision of the Illinois Department of Public Health or an associated municipal, county or regional department of public health or public health district.

The PDMP and all supporting documents must be submitted with the NOI. The PDMP must be submitted electronically in Adobe Acrobat format to epa.ILG87pestPDMP@illinois.gov.

The plan must be kept up-to-date thereafter for the duration of coverage under this general permit, even if the discharges subsequently fall below the applicable treatment area thresholds listed in Table 3.

The PDMP does not contain effluent limitations as the effluent limitations are specified in Parts 2 and 3 of the permit. The PDMP documents how the permittee will implement the effluent limitations in Parts 2 and 3 of the permit, including the evaluation and selection of Pest Management Measures to meet those effluent limitations in order to minimize discharges. In the PDMP, the permittee may incorporate by reference any procedures or plans in other documents that meet the requirements of this permit. If the permittee relies upon other documents to comply with the effluent limitations in this permit, such as a pre-existing pest management plan, the permittee must attach to the PDMP a copy of any portions of any documents that are used to document the implementation of the effluent limitations.

5.1 Contents of the Pesticide Discharge Management Plan

The PDMP must include the following elements:

a. Pesticide Discharge Management Plan Team
b. Problem Identification
c. Pest Management Options Evaluation
d. Response Procedures
    1. Spill Response Procedures
    2. Adverse Incident Response Procedures
e. Signature Requirements

5.1.1 PDMP Team

Permittees must identify all persons (by name and contact information) that compose the team as well as each person's individual responsibilities, including:

a. Person(s) responsible for managing pests in relation to the pest management area;

b. Person(s) responsible for developing and revising the PDMP; and

c. Person(s) responsible for developing, revising, and implementing corrective actions and other effluent limitation requirements.

5.1.2 Problem Identification

Permittees must document the following:

a. Pest problem description. Document a description of the pest problem at the pest management area, including identification of the target pest(s), source(s) of the pest problem, and source of data used to identify the problem in Parts 2.2.1, 2.2.2, 2.2.3, 2.2.4, and 2.2.5.

b. Action Threshold(s). Describe the action threshold(s) for the pest management area, including the data used in developing the action threshold(s) and method(s) to determine when the action threshold(s) has been met.

c. General location map. In the plan, include a general location map (e.g., USGS quadrangle map, a portion of a city or county map, or other map) that identifies the geographic boundaries of the area to which the plan applies and location of the waters of the State.

d. Water quality standards. Document any water(s) identified as impaired by a substance which either is an active ingredient or a degradate of such an active ingredient.

5.1.3 Pest Management Options Evaluation

Permittees must document the evaluation of the pest management options, including combination of the pest management options, to control the target pest(s). Pest management options include the following: No action, prevention, mechanical/physical methods, cultural methods, biological control agent, and pesticides. In the

evaluation, permittees must consider the impact to water quality, impact to non-target organisms, feasibility, cost effectiveness, and any relevant previous Pest Management Measures.

5.1.4 Response Procedures

Permittees must document the following procedures in the PDMP:

a. Spill Response Procedures – At a minimum, the permittees must have:

1. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases to waters of the State. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the PDMP team.

2. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies.

b. Adverse Incident Response Procedures – At a minimum, the permittees must have:

1. Procedures for responding to any adverse incident resulting from pesticide applications.

2. Procedures for notification of the adverse incident, both internal to the permittee agency/organization and external. Contact information for State permitting agency, nearest emergency medical facility, and nearest hazardous chemical responder must be in locations that are readily accessible and available.

5.1.5 Signature Requirements

Permittees must sign, date and certify the PDMP in accordance with Appendix B.

5.2 Pesticide Discharge Management Plan Modifications

Permittees must modify the PDMP whenever necessary to address any of the conditions for corrective action in Part 6.1 or when a change in pest control activities significantly changes the type or quantity of pollutants discharged. Changes to the PDMP must be made before the next pesticide application that results in a discharge, if practicable, or if not, no later than 90 days after any change in pesticide application activities. The revised PDMP must be signed and dated in accordance with Appendix B. Permittees must submit the modified PDMP electronically to epa.ILG87pestPDMP@illinois.gov.

5.3 Pesticide Discharge Management Plan Availability

Permittees must retain a copy of the current PDMP, along with all supporting maps and documents, at the address provided on the NOI. The PDMP and all supporting documents must be readily available and copies of any of these documents provided, upon request, to IEPA or to any local agency governing discharges or pesticide applications within their respective jurisdictions; and to representatives of any federal or state agencies. IEPA may provide copies of the PDMP or other information related to this permit that is in its possession to members of the public. Any Confidential Business Information (CBI), as defined in 40 CFR Part 2, may be withheld from the public provided that a claim of confidentiality is properly asserted and documented in accordance with 40 CFR Part 2; however, CBI must be submitted to IEPA, if requested, and may not be withheld from those staff within IEPA, or any other state or federal agency cleared for CBI review.

6.0 Corrective Action

All permittees must comply with the provisions of Part 6 for any discharges authorized under this permit, with compliance required upon the beginning of such discharge. If the permittee is not the applicator, this section is also applicable to the contract applicator.

6.1 Situations Requiring Revision of Pest Management Measures

Permittees must review and, as necessary, revise the evaluation and selection of Pest Management Measures consistent with Parts 2.1 and 2.2 for the following situations:

a. An unauthorized release or discharge associated with the application of pesticides (e.g., spill, leak, or discharge not authorized by this or another NPDES permit) occurs.

b. Permittee becomes aware, or IEPA concludes, that Pest Management Measures are not adequate/sufficient for the discharge to meet applicable State water quality standards;

c. Any monitoring activities indicate failure to meet applicable technology-based effluent limitations in Part 2.

d. An inspection or evaluation of activities by IEPA reveals that modifications to the Pest Management Measures are necessary to meet the effluent limitations in this permit.

e. Any permittee observes or is otherwise made aware of an adverse incident, as defined in Appendix A.

6.2 Corrective Action Deadlines

If a permittee determines that changes to the Pest Management Measures are necessary to eliminate any situation identified in Part 6.1, such changes must be made before or, if not practicable, as soon as possible after the next pesticide application that results in a discharge.

6.3 Effect of Corrective Action

The occurrence of a situation identified in Part 6.1 may constitute a violation of the permit. Correcting any situation identified in Part 6.1 does not absolve permittees of liability for any original violation. However, failure to comply with Part 6.2 constitutes an additional permit violation. IEPA will consider the appropriateness and promptness of corrective action in determining enforcement responses to permit violations.

IEPA may impose additional requirements and schedules of compliance, including requirements to submit additional information concerning the condition(s) requiring corrective action or schedules and requirements more stringent than specified in this permit. Those requirements and schedules will supersede those of Parts 6.1 and 6.2 if such requirements conflict.

6.4 Adverse Incident Documentation and Reporting

6.4.1 Twenty-Four Hour Adverse Incident Notification

6.4.1.1 Adverse Incident Notification Required

If a permittee observes or is otherwise made aware of an adverse incident, as defined in Appendix A, which may have resulted from a discharge from a pesticide application, made by the permittee or a contract applicator, the permittee must immediately notify the Illinois Emergency Management Agency (IEMA) and USEPA, Region 5, Pesticide Program. This notification must be made by telephone within 24 hours of the permittee becoming aware of the adverse incident and must include at least the following information:

a. The caller's name and telephone number;

b. Permittees name and mailing address;

c. NPDES permit number;

d. The name and telephone number of a contact person, if different than the person providing the 24-hour notice;

e. How and when the permittee became aware of the adverse incident;

f. Description of the location of the adverse incident;

g. Description of the adverse incident identified and the pesticide product, including USEPA pesticide registration number, for each product applied in the area of the adverse incident; and

h. Description of any steps the permittee has taken or will take to correct, repair, remedy, clean-up, or otherwise address any adverse effects.

If a permittee is unable to notify IEMA within 24 hours, the permittee must do so as soon as possible and also provide an appropriate rationale why the permittee was unable to provide such notification within 24 hours.

The adverse incident notification and reporting requirements are in addition to what the registrant is required to submit under FIFRA section 6(a)(2) and its implementing regulations at 40 CFR Part 159.

6.4.1.2 Adverse Incident Notification Not Required

Reporting of adverse incidents is not required under this permit in the following situations:

a. A permittee is aware of facts that indicate that the adverse incident was not related to toxic effects or exposure from the pesticide application;

b. A permittee has been notified by IEMA and retains such notification, that the reporting requirement has been waived for this incident or category of incidents;

c. A permittee receives information of an adverse incident, but that information is clearly erroneous; or

d. An adverse incident occurs to pests that are similar in kind to potential target pests identified on the FIFRA label.

6.4.2 Fifteen Day Adverse Incident Written Report

Within fifteen (15) business days of a reportable adverse incident pursuant to Part 6.4.1, permittees must provide a written report of the adverse incident to the IEPA Compliance Assurance Section. Permittees must submit the 15-day adverse incident report electronically to epa.ILG87pest5day@illinois.gov. The adverse incident report must include at least the following information:

a. Information required to be provided in Part 6.4.1;

b. Date and time the permittee contacted IEMA notifying the Agency of the adverse incident, who the permittee spoke with at IEMA, and any instructions received from IEMA;

c. Location of incident, including the names of any waters affected and appearance of those waters (sheen, color, clarity, etc);

d. A description of the circumstances of the adverse incident including species affected, estimated number of individual and approximate size of dead or distressed organisms;

e. Magnitude and scope of the affected area (e.g. estimate aquatic surface area or total stream distance affected);

f. Pesticide application rate; intended use site (e.g., on the bank, above waters, or directly to water), method of application; and name of pesticide product and USEPA pesticide registration number;

g. Description of the habitat and the circumstances under which the adverse incident occurred (including any available ambient water data for pesticides applied);

h. If laboratory tests were performed, an indication of what test(s) were performed, and when; additionally, a summary of the test results within 5 days after they become available if not available at the time of submission of the 15-day adverse incident report;

i. Description of actions to be taken to prevent recurrence of adverse incidents; and

j. Signature, date, and certification in accordance with Appendix B.

The Adverse Incident Report form is available on the Internet at www.epa.state.il.us/water/permits/pesticide/forms/adverse-incident.pdf.

6.4.3 Adverse Incident to Federally Threatened or Endangered Species or Critical Habitat

Notwithstanding any of the other adverse incident notification requirements of this section, if a permittee or contract applicator becomes aware of an adverse incident affecting a federally listed threatened or endangered species or its federally designated critical habitat which may have resulted from a discharge from the permittee's pesticide application, the permittee must immediately notify the United States Fish and Wildlife Service (FWS). This information must be made by telephone, to the contacts listed on USFWS's website at www.fws.gov/offices, immediately upon the permittee becoming aware of the adverse incident, and must include at least the following information:

a. The caller's name and telephone number;

b. Permittee name and mailing address;

c. The name of the affected species;

d. How and when the permittee became aware of the adverse incident;

e. Description of the location of the adverse incident;

f. Description of the adverse incident and the pesticide product, including the USEPA pesticide registration number, for each product applied in the area of the adverse incident, and;

g. Description of any steps the permittee has taken or will take to alleviate the adverse impact to the species.

Additional information on federally listed threatened or endangered species and federally designated critical habitat is available from FWS (www.fws.gov) for terrestrial or freshwater species.

6.5 Reportable Spills and Leaks

6.5.1 Spill, Leak, or Other Unpermitted Discharge Notification

Where a leak, spill, or other release into waters of the State containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs in any 24-hour period, the permittee or contract applicator must notify the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302. The permittee must also notify IEMA at (800) 782-7860. Both of these Agencies shall be notified immediately and as soon as the permittee has knowledge of the release. Contact information must be in locations that are readily accessible and available in the area where the spill, leak, or other unpermitted discharge may occur.

Local requirements may necessitate also reporting spills or leaks to local emergency response, public health, or drinking water supply agencies.

6.5.2 Fifteen-Day Spill, Leak, or Other Unpermitted Discharge Documentation

If a permittee becomes aware of a spill, leak, or other unpermitted discharge which initiates the notification requirements in Part 6.5.1 and results in an adverse incident, then the permittee must report the incident per the requirements in Parts 6.4.1 and 6.4.2. If the spill, leak, or other unpermitted discharges initiates the notification requirements in Part 6.5.1, but does not result in an adverse incident, then permittee must document and retain the following information within 15 business days of becoming aware of the situation:

a. Information required to be provided in Part 6.5.1

b. Summary of corrective action taken or to be taken including date initiated and date completed or expected to be completed; and

c. Any measures to prevent recurrence of such a spill or leak or other discharge, including notice of whether PDMP modifications are required as a result of the spill or leak.

6.6 Other Corrective Action Documentation

For situations identified in Part 6.1, other than for adverse incidents (addressed in Part 6.4), or reportable spills or leaks (addressed in Part 6.5), permittees must document the situation requiring corrective action and the planned corrective action within fifteen (15) business days of becoming aware of that situation and retain a copy of this documentation. This documentation must include the following information:

a. Identification of the condition requiring the need for corrective action review, including any ambient water quality monitoring that assisted in determining that discharges did not meet water quality standards;

b. Brief description of the situation;

c. Date the problem was identified.

d. Brief description of how the problem was identified, how the permittee learned of the situation, and date the permittee learned of the situation;

e. Summary of corrective action taken or to be taken, including date initiated and date completed or expected to be completed; and

f. Any measures to prevent reoccurrence of such an incident, including notice of whether PDMP modifications are required as a result of the incident.

7.0 Recordkeeping and Annual Reporting

The recordkeeping and annual reporting requirements vary depending on whether a permittee meets the definition of a small entity, as defined in Appendix A, and/or exceeds one or more of the annual treatment area thresholds listed in Table 3.

Permittees must keep written records as required in this permit for all discharges covered under this permit. These records must be accurate and complete to demonstrate the permittees compliance with the conditions of this permit. Permittees may rely on records and documents developed for other obligations, such as requirements under FIFRA, and state or local pesticide programs, provided all requirements of this permit are satisfied.

IEPA recommends that all permittees covered under this permit keep records of acres or linear miles treated for all applicable use patterns covered under this general permit. The records shall be kept up-to-date to help the permittee determine if the annual treatment area thresholds, as identified in Part 2.2, are met during any calendar year.

7.1 Level 1: Recordkeeping

Level 1 recordkeeping applied to all permittees which must keep the following records:

a. A copy of the NOI submitted to IEPA, any correspondence exchanged between the permittee and IEPA specific to coverage under this permit, and a copy of the IEPA acknowledgment letter assigning the permit number;

b. A copy of this permit;

c. A copy of any Adverse Incident Reports (Part 6.4.2);

d. Rationale for any determination that reporting of an identified adverse incident is not required consistent with allowances identified in Part 6.4.1.2;

e. A copy of any corrective action documentation (Part 6.6);

f. A copy of any spill, leak, or other unpermitted discharge documentation (Part 6.5.2); and

g. Endangered Species Compliance Documentation

Permittees conducting pesticide application activities pursuant to the Vector Control Act (410 ILCS 95) which are funded by, conducted in accordance with, or under the supervision of the Illinois Department of Public Health or an associated municipal, county or regional department of public health or public health district are only required to perform Level 1 recordkeeping.

7.2 Level 2: Recordkeeping

Level 2 recordkeeping applies to permittees which exceed one or more of the annual treatment area thresholds listed in Table 3 and meet the definition of a small entity, as defined in Appendix A, must retain the following records at the address provided on the NOI. If the permittee is not the applicator, some of the records listed below shall be kept by the contract applicator.

a. Documentation of equipment calibration; and

b. Information on each treatment area to which pesticides are discharged, including:

1. Description of treatment area, by name and/or location including the size (acres or linear feet) of treatment area, as well as the closest named waters of the State to which pesticide(s) discharged are tributary;

2. Pesticide use pattern(s) (i.e., mosquito or other insect pest control, etc.)

3. Target pest(s) and explanation of need for pest control;

4. Description of pest management measures(s) implemented prior to the first pesticide application;

5. If different from the permittee, company name and contact information for contract applicator;

6. Name of each pesticide product used including the USEPA pesticide registration number;

7. Quantity of each pesticide product applied to each treatment area;

8. Pesticide application start and end date(s);

9. Whether or not visual monitoring was conducted during pesticide application and/or post-application and if not; why not and whether monitoring identified any possible or observable adverse incidents caused by application of pesticides; and

10. Name of any waters of the State in the treatment area currently listed as impaired for pesticides on the 303(d) list. This should include the name of the pesticide for which it is impaired.

An evaluation worksheet for documenting this information for each treatment area is available on the Internet at www.epa.state.il.us/water/permits/pesticide/forms/discharge-evaluation.pdf.

7.3. Level 3: Recordkeeping

Level 3 recordkeeping applies to permittees which exceed one or more of the annual treatment area thresholds listed in Table 3 and do not meet the definition of a small entity, as defined in Appendix A, must retain the following records at the address provided on the NOI. If the permittee is not the applicator, some of the records listed below shall be kept by the contract applicator.

a. A copy of the PDMP, including any modifications made to the PDMP during the term of this permit;

b. A copy of the annual reports submitted to IEPA;

c. Documentation of equipment calibration; and

d. Information on each treatment area to which pesticides are discharged, including:

1. Description of treatment area, by name and/or location including the size (acres or linear feet) of treatment area, as well as the closest named waters of the State to which pesticide(s) discharged are tributary;

2. Pesticide use pattern(s) (i.e., mosquito or other insect pest control, etc.)

3. Target pest(s) and explanation of need for pest control;

4. Action threshold(s);

5. Method and/or data used to determine that action threshold(s) has been met;

6. Description of pest management measures(s) implemented prior to the first pesticide application;

7. If different from the permittee, company name and contact information for contract applicator;

8. Name of each pesticide product used including the USEPA pesticide registration number;

9. Quantity of each pesticide product applied to each treatment area;

10. Pesticide application start and end date(s);

11. Whether or not visual monitoring was conducted during pesticide application and/or post-application and if not; why not and whether monitoring identified any possible or observable adverse incidents caused by application of pesticides; and

12. Name of any waters of the State in the treatment area currently listed as impaired for pesticides on the 303(d) list. This should include the name of the pesticide for which it is impaired.

7.4 Additional Recordkeeping Requirements for All Permittees

All required records must be documented as soon as possible but no later than 15 business days following completion each pesticide application. Permittees must retain any records required under this permit for at least 3 years from the date that coverage under this permit expires or is terminated. Permittees must make available to IEPA, including an authorized representative of IEPA, all records kept under this permit upon request and provide copies of such records, upon request.

7.5 Annual Reporting

Permittees which exceed one or more of the annual treatment area thresholds listed in Table 3 and do not meet the definition of a small entity, as defined in Appendix A, must submit an annual report to IEPA. Once the permittee meets the obligation to submit an annual report, the permittee must submit an annual report each calendar year thereafter for the duration of coverage under this general permit, whether or not the permittee has discharges from the application of pesticides in any subsequent calendar year. Permittees must submit the annual report electronically to epa.ILG87pestAnnRep@illinois.gov. The annual report must be submitted to IEPA no later than February 15th of the following year for all pesticide activities covered under this permit occurring during the previous calendar year.

Permittees conducting pesticide application activities pursuant to the Vector Control Act (410 ILCS 95) which are funded by, conducted in accordance with, or under the supervision of the Illinois Department of Public Health or an associated municipal, county or regional department of public health or public health district are not required to submit an annual report.

The annual report must include information for the calendar year, with the first annual report required to include activities for the portion of the calendar year after the effective date of the NOI. If the effective date is after December 1, the permittee is not required to submit an annual report for that first partial year but must submit annual reports thereafter, with the first annual report submitted also including information from the first partial year.

When permittees terminate permit coverage, as specified in Part 1.2.5, an annual report must be submitted for the portion of the year up through the date of termination. The annual report is due no later than 45-days after the termination date, or February 15th of the following year, whichever is earlier.

The annual report must contain the following information:

a. Permittee's name and contact information;

b. NPDES permit number;

c. Contact person name, title, e-mail address (if any), and phone number; and

d. For each treatment area, report the following information:

1. Description of treatment area, by name and/or location including the size (acres or linear feet) of treatment area, as well as the closest named waters of the State to which pesticide(s) discharge are tributary;

2. Pesticide use pattern(s) (i.e., mosquito and other insects, etc.) and target pest(s);

3. Company name(s) and contact information for the pesticide applicator(s), if different from the permittee;

4. Total amount of each pesticide product applied for the reporting year by the USEPA pesticide registration number(s) and by application method (e.g., aerially by fixed-wing or rotary aircraft, broadcast spray, etc.);

5. Whether this pest control activity was addressed in the PDMP prior to pesticide application;

6. If applicable, an annual report of any adverse incidents as a result of these treatment(s), for incidents, as described in Part 6.4.1; and

7. If applicable, description of any corrective action(s), including spill responses, resulting from pesticide application activities and the rationale for such action(s).

The Annual Report form is available on the Internet at www.epa.state.il.us/water/permits/pesticide/forms/annual-report.pdf.

8.0 Contact Information and Mailing Addresses

Permittees must submit the following documents to the email addresses listed below.

a. PDMP to epa.ILG87pestPDMP@illinois.gov

b. Annual Reports to epa.ILG87pestAnnRep@illinois.gov

c. Within 15 business days of becoming aware of an adverse incident, permittees must send all incident reports under Part 6.4 to epa.ILG87pest5day@illinois.gov

All other written correspondence concerning discharges covered under this permit and directed to the IEPA, including individual NPDES permit applications, must be sent to the IEPA Headquarters address listed below.

Note: If IEPA notifies dischargers (either directly, by public notice, or by making information available on the Internet) of other reporting options that become available at a later date (e.g., electronic submission), permittees may take advantage of those options, in accordance with the instructions provided by IEPA, to satisfy the reporting requirements of this permit.

8.1 IEPA Headquarters Address

Illinois Environmental Protection Agency
Division of Water Pollution Control, Mail Code #15
Attention: Permit Section
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276
www.epa.illinois.gov/topics/forms/water-permits/pesticide/index

8.2 USEPA, Region 5 Address

United States Environmental Protection Agency
Region 5
Attention: Pesticide Program
77 W. Jackson Blvd.
Chicago, IL 60604

Appendix A
Definitions, Abbreviations, and Acronyms

A.1. DEFINITIONS

Action Threshold – the point at which pest populations or environmental conditions cannot be tolerated necessitating that pest control action be taken based on economic, human health, aesthetic, or other effects. An action threshold may be based on current and/or past environmental factors that are or have been demonstrated to be conducive to pest emergence and/or growth, as well as past and/or current pest presence. Action thresholds are those conditions that indicate both the need for control actions and the proper timing of such actions.

Active Ingredient – any substance (or group of structurally similar substances if specified by the Agency) that will prevent, destroy, repel or mitigate any pest, or that functions as a plant regulator, desiccant, or defoliant within the meaning of FIFRA sec. 2(a). [40 CFR 152.3] Active ingredient also means a pesticidal substance that is intended to be produced and used in a living plant, or in the produce thereof, and the genetic material necessary for the production of such a pesticidal substance. [40 CFR 174.3]

Adverse Incident – means an unusual or unexpected incident that a permittee or contract applicator has observed upon inspection or of which the permittee otherwise become aware, in which:

1. There is evidence that a person or non-target organism has likely been exposed to a pesticide residue, and
2. The person or non-target organism suffered a toxic or adverse effect.

The phrase toxic or adverse effects includes effects that occur within waters of the State on non-target plants, fish or wildlife that are unusual or unexpected (e.g., effects are to organisms not otherwise described on the pesticide product label or otherwise not expected to be present) as a result of exposure to a pesticide residue, and may include:

- Distressed or dead juvenile and small fishes
- Washed up or floating fish
- Fish swimming abnormally or erratically
- Fish lying lethargically at water surface or in shallow water
- Fish that are listless or nonresponsive to disturbance
- Stunting, wilting, or desiccation of non-target submerged or emergent aquatic plants
- Other dead or visibly distressed non-target aquatic organisms (amphibians, turtles, invertebrates, etc.)

The phrase, toxic or adverse effects, also includes any adverse effects to humans (e.g., skin rashes) or domesticated animals that occur either from direct contact with or as a secondary effect from a discharge (e.g., sickness from consumption of plants or animals containing pesticides) to waters of the State that are temporally and spatially related to exposure to a pesticide residue (e.g., vomiting, lethargy).

Annual Treatment Area Threshold – an area (in acres) or in linear distance (in miles) in a calendar year to which a permittee is authorizing and/or performing pesticide applications in that area for activities covered under this permit.

Applicator – any person(s) who performs the application of a pesticide or who has day-to-day control of the application (i.e., they are authorized to direct workers to carry out those activities) that results in a discharge to waters of the State.

Biological Control Agents – these agents are organisms that can be introduced to operator sites, such as herbivores, predators, parasites, and hyperparasites. [Source: USFWS IPM Guidance, 2004]

Biological Pesticides (also called biopesticides) – include microbial pesticides, biochemical pesticides and plant-incorporated protectants (PIP). Microbial pesticide means a microbial agent intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or dessicant, that (1) is a eucaryotic microorganism including, but not limited to, protozoa, algae, and fungi; (2) is a procaryotic microorganism, including, but not limited to, Eubacteria and Archaebacteria; or (3) is a parasitically replicating microscopic element, including but not limited to, viruses. [40 CFR 158.2100(b)] Biochemical pesticide mean a pesticide that (1) is a naturally-occurring substance or structurally-similar and functionally identical to a naturally-occurring substance; (2) has a history of exposure to humans and the environment demonstrating minimal toxicity, or in the case of a synthetically-derived biochemical pesticides, is equivalent to a naturally-occurring substance that has such a history; and (3) has a non-toxic mode of action to the target

pest(s). [40 CFR 158.2000(a)(1)] Plant-incorporated protectant means a pesticidal substance that is intended to be produced and used in a living plant, or in the produce thereof, and the genetic material necessary for production of such a pesticidal substance. It also includes any inert ingredient contained in the plant, or produce thereof. [40 CFR 174.3]

Chemical Pesticides – all pesticides not otherwise classified as biological pesticides.

Contract Applicator – any person(s) who make contractual pesticide applications for which they or their employer receives compensation (e.g., pest control companies).

Cultural Methods – manipulation of the habitat to increase pest mortality by making the habitat less suitable to the pest.

Declared Pest Emergency Situation – an event defined by a public declaration by a federal, state, or local governmental body or agency of a pest problem determined to require control through application of a pesticide beginning less than ten days after identification of the need for pest control. This public declaration may be based on:

1. Significant risk to human health;
2. Significant economic loss; or
3. Significant risk to:
   i. Endangered species,
   ii. Threatened species,
   iii. Beneficial organisms, or
   iv. The environment.

Director – means the Director of the Illinois Environmental Protection Agency or an authorized representative.

Discharge – when used without qualification, means the "discharge of a pollutant." [40 CFR 122.2]

Discharge of a pollutant – any addition of any "pollutant" or combination of pollutants to "waters of the State" from any "point source," or any addition of any pollutant or combination of pollutants to the water of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft that is being used as a means of transportation. This includes additions of pollutants into waters of the State from: surface runoff that is collected or channeled by man; discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. [Excerpted from 40 CFR 122.2]

USEPA Approved or Established Total Maximum Daily Loads (TMDLs) – "USEPA Approved TMDLs" are those that are developed by the State and approved by USEPA. "USEPA Established TMDLs" are those that are issued by USEPA.

Facility or Activity – any NPDES "point source" (including land or appurtenances thereto) that is subject to regulation under the NPDES program. [40 CFR 122.2]

Impaired Water (or "Water Quality Impaired Water" or "Water Quality Limited Segment") – a water is impaired for purposes of this permit if it has been identified by the State pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State water quality standards (these waters are called "water quality limited segments" under 40 CFR 130.2(j)). Impaired waters include both waters with approved or established TMDLs, and those for which a TMDL has not yet been approved or established.

Inert Ingredient – any substance (or group of structurally similar substances if designated by the Agency), other than an active ingredient, that is intentionally included in a pesticide product. [40 CFR 152.3] Inert ingredient also means any substance, such as a selectable marker, other than the active ingredient, where the substance is used to confirm or ensure the presence of the active ingredient, and includes the genetic material necessary for the production of the substance, provided that genetic material is intentionally introduced into a living plant in addition to the active ingredient. [40 CFR 174.3]

Mechanical/Physical Methods – mechanical tools or physical alterations of the environment, for pest prevention or removal.

Minimize – to reduce and/or eliminate pesticide discharges to waters of the State through the use of Pest Management Measures to the extent technologically available and economically practicable and achievable.

Non-target Organisms – includes the plant and animal hosts of the target species, the natural enemies of the target species living in the community, and other plants and animals, including vertebrates, living in or near the community that are not the target of the pesticide.

Operator – for the purpose of this permit, means any person(s) associated with the application of a pesticide that results in a discharge to waters of the State that meets either or both of the following two criteria:

a. The person(s) with control over the hiring of a contract applicator, or making the decision to perform pesticide applications, including the ability to modify those decisions, that results in a discharge to waters of the State, or

b. The person(s) who performs the application of pesticides or who has day-to-day control of the pesticide application, that results in a discharge to waters of the State.

Outstanding Resource Water – is a surface water body or water body segment that is of exceptional ecological or recreational significance and must be designated by the Illinois Pollution Control Board pursuant to 35 Ill. Adm. Code 102.Subpart H.

Permittee – an operator that has obtained coverage under this general permit.

Person – any individual, partnership, co-partnership, firm, company, limited liability company, corporation, association, joint stock company, trust, estate, political subdivision, state agency, or any other legal entity, or their legal representative, agent or assigns.

Pest – consistent with 40 CFR 152.5, any organism under circumstances that make it deleterious to man or the environment, if it is:

a. Any vertebrate animal other than man;

b. Any invertebrate animal, including but not limited to, any insect, other arthropod, nematode, or mollusk such as a slug and snail, but excluding any internal parasite of living man or other living animals;

c. Any plant growing where not wanted, including any moss, alga, liverwort, or other plant of any higher order, and any plant part such as a root; or

d. Any fungus, bacterium, virus, or other microorganism, except for those on or in living man or other living animals and those on or in processed food or processed animal feed, beverages, drugs (as defined in FFDCA sec. 201(g)(1)) and cosmetics (as defined in FFDCA sec. 201(i)).

Pest Management Area – the area of land, including any water, for which the permittee has responsibility for and is authorized to conduct pest management activities as covered by this permit (e.g., for a permittee who is a mosquito control district, the pest management area is the total area of the district).

Pest Management Measure – any practice used to meet the effluent limitations that comply with manufacturer specifications, industry standards and recommended industry practices related to the application of pesticides, relevant legal requirements and other provisions that a prudent permittee would implement to reduce and/or eliminate pesticide discharges to waters of the State.

Pesticide – means (1) any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, (2) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant, and (3) any nitrogen stabilizer, except that the term "pesticide" shall not include any article that is a "new animal drug" within the meaning of section 201(w) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321(w)), that has been determined by the Secretary of Health and Human Services not to be a new animal drug by a regulation establishing conditions of use for the article, or that is an animal feed within the meaning of section 201(x) of such Act (21 U.S.C. 321(x)) bearing or containing a new animal drug. The term "pesticide" does not include liquid chemical sterilant products (including any sterilant or subordinate disinfectant claims on such products) for use on a critical or semi-critical device, as defined in section 201 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 321). For purposes of the preceding sentence, the term "critical device" includes any device that introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body and the term "semi-critical device" includes any device that contacts intact mucous membranes but

which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. [FIFRA Section 2(u)]

The term "pesticide" applies to insecticides, herbicides, fungicides, rodenticides, and various other substances used to control pests. The definition encompasses all uses of pesticides authorized under FIFRA including uses authorized under sections 3 (registration), 5 (experimental use permits), 18 (emergency exemptions), 24(c) (special local needs registrations), and 25(b) (exemptions from FIFRA).

Note: Drugs used to control diseases of humans or animals (such as livestock and pets) are not considered pesticides; such drugs are regulated by the Food and Drug Administration. Fertilizers, nutrients, and other substances used to promote plant survival and health are not considered plant growth regulators and thus are not pesticides. Biological control agents, except for certain microorganisms, are exempted from regulation under FIFRA. (Biological control agents include beneficial predators such as birds or ladybugs that eat insect pests, parasitic wasps, fish, etc).

This permit uses the term "pesticide" when referring to the "pesticide, as applied." When referring to the chemical in the pesticide product with pesticidal qualities, the permit uses the term "active ingredient."

Pesticide Product – a pesticide in the particular form (including composition, packaging, and labeling) in which the pesticide is, or is intended to be, distributed or sold. The term includes any physical apparatus used to deliver or apply the pesticide if distributed or sold with the pesticide.

Pesticide Research and Development – activities undertaken on a systematic basis to gain new knowledge (research) and/or the application of research findings or other scientific knowledge for the creation of new or significantly improved products or processes (experimental development).

Pesticide Residue – includes that portion of a pesticide application that is discharged from a point source to waters of the State and no longer provides pesticidal benefits. It also includes any degradates of the pesticide.

Point Source – any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff. [40 CFR 122.2]

Pollutant – dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water. [Excerpted from 35 Ill. Adm. Code 301.340] For purposes of this definition, a "biological pesticide" is considered a "biological material," and any "pesticide residue" resulting from use of a "chemical pesticide" is considered a "chemical waste." [Excerpted from 40 CFR 122.2]

Small Entity – any (1) public entity that serves a population of 10,000 or less, (2) a person(s) applying pesticides on private property where they or any member of their immediate family reside or property that they own or lease, or (3) a private enterprise that does not exceed the Small Business Administration size standard as identified at 13 CFR 121.201.

Target Pest – the organism(s) toward which pest management measures are being directed.

Total Maximum Daily Loads (TMDLs) – a TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and an allocation of that amount of the pollutant's sources. A TMDL includes wasteload allocations (WLAs) for point source discharges, load allocations (LAs) for nonpoint sources and/or natural background, and must include a margin of safety (MOS) and account for seasonal variations. [See section 303(d) of the Clean Water Act and 40 CFR 130.2 and 130.7]

Treatment Area – the entire area, whether over land or water, where a pesticide application is intended to provide pesticidal benefits within the pest management area. In some instances, the treatment area will be larger than the area where pesticides are actually applied. For example, the treatment area for a stationary drip treatment into a canal includes the entire width and length of the canal over which the pesticide is intended to control weeds. Similarly, the treatment area for a lake or marine area is the water surface area where the application is intended to provide pesticidal benefits.

Waters – all accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon this state.

Water Quality Impaired – see 'Impaired Water'.

Water Quality Standards – a water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. Water quality standards also include an antidegradation policy and implementation procedures. See 35 Ill. Adm. Code 302.

Wetlands - means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. [40 CFR 122.2]

A.2. ABBREVIATIONS AND ACRONYMS

CFR	Code of Federal Regulations
CWA	Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 *et seq*)
FFDCA	Federal Food, Drug, and Cosmetic Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §136 *et seq*
FWS	United States Fish and Wildlife Service
IDNR	Illinois Department of Natural Resources
IEPA	Illinois Environmental Protection Agency
IEMA	Illinois Emergency Management Agency
IPM	Integrated Pest Management
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center
ORW	Outstanding Resource Water
PDMP	Pesticide Discharge Management Plan
TMDL	Total Maximum Daily Load
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
WQS	Water Quality Standard

Appendix B
Standard Permit Conditions – Attachment H

Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24-Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hou period.

8-Hour Composite Sample means a combination of at least : sample aliquots of at least 100 milliliters, collected at periodi intervals during the operating hours of a facility over an 8-hou period.

Flow Proportional Composite Sample means a combination o sample aliquots of at least 100 milliliters collected at periodi intervals such that either the time interval between each aliquot o the volume of each aliquot is proportional to either the stream flow a the time of sampling or the total stream flow since the collection o the previous aliquot.

(1) **Duty to comply.** The permittee must comply with al conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcemen action, permit termination, revocation and reissuance modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act fo toxic pollutants within the time provided in the regulations tha establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.

(2) **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) **Proper operation and maintenance.** The permittee shall a all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) **Duty to provide information.** The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

(9) **Inspection and entry.** The permittee shall allow an authorized representative of the Agency or USEPA (including an authorized contractor acting as a representative of the Agency or USEPA), upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) **Monitoring and records.**

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. Records related to the permittee's sewage sludge use and disposal activities shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Agency or USEPA at any time.
(c) Records of monitoring information shall include:
(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.
(d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) **Signatory requirement.** All applications, reports or information submitted to the Agency shall be signed and certified.

follows:

(1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation:
(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.

(b) **Reports.** All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:
(1) The authorization is made in writing by a person described in paragraph (a); and
(2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and
(3) The written authorization is submitted to the Agency.

(c) **Changes of Authorization.** If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d) **Certification.** Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(12) **Reporting requirements.**

(a) **Planned changes.** The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility.
Notice is required when:
(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR 122.29 (b) or
(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements pursuant to 40 CFR 122.42 (a)(1).
(3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit

sites not reported during the permit application process or not reported pursuant to an approved land application plan.

(b) **Anticipated noncompliance.** The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) **Transfers.** This permit is not transferable to any person except after notice to the Agency.

(d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(e) **Monitoring reports.** Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).

(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(f) **Twenty-four hour reporting.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:

(1) Any unanticipated bypass which exceeds any effluent limitation in the permit.

(2) Any upset which exceeds any effluent limitation in the permit.

(3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.

The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.

(g) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).

(h) **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

(13) **Bypass.**

(a) Definitions.

(1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.

(2) Severe property damage means substantial physica damage to property, damage to the treatment facilitie which causes them to become inoperable, o substantial and permanent loss of natural resource which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays ir production.

(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluen limitations to be exceeded, but only if it also is for essentia maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).

(c) Notice.

(1) Anticipated bypass. If the permittee knows ir advance of the need for a bypass, it shall submit prio notice, if possible at least ten days before the date o the bypass.

(2) Unanticipated bypass. The permittee shall submi notice of an unanticipated bypass as required ir paragraph (12)(f) (24-hour notice).

(d) Prohibition of bypass.

(1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass unless:

(i) Bypass was unavoidable to prevent loss of life personal injury, or severe property damage;

(ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatmen facilities, retention of untreated wastes, o maintenance during normal periods of equipmen downtime. This condition is not satisfied i adequate back-up equipment should have beer installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipmen downtime or preventive maintenance; and

(iii) The permittee submitted notices as required under paragraph (13)(c).

(2) The Agency may approve an anticipated bypass, afte considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).

(14) **Upset.**

(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant

evidence that:
(1) An upset occurred and that the permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated; and
(3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).
(4) The permittee complied with any remedial measures required under paragraph (4).

(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(15) **Transfer of permits.** Permits may be transferred by modification or automatic transfer as described below:
(a) Transfers by modification. Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
(b) Automatic transfers. As an alternative to transfers under paragraph (a), any NPDES permit may be automatically transferred to a new permittee if:
(1) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;
(2) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage and liability between the existing and new permittees; and
(3) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.

(16) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:
(a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
(1) One hundred micrograms per liter (100 ug/l);
(2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
(3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or
(4) The level established by the Agency in this permit.
(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.

(17) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:
(a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
(b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
(c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(18) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:
(a) User charges pursuant to Section 204 (b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;
(b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and
(c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.

(19) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.

(20) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(21) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.

(22) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.
Additional penalties for violating these sections of the Clean Water Act are identified in 40 CFR 122.41 (a)(2) and (3).

(23) The Clean Water Act provides that any person who falsifies tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

(24) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(25) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(26) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.

(27) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board or any court with jurisdiction.

(28) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

(Rev. 7-9-2010 bah)

Appendix B
Attachment H - Standard Conditions

Definitions

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24-Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8-Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

(1) **Duty to comply**. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.

(2) **Duty to reapply**. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.

(3) **Need to halt or reduce activity not a defense**. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) **Duty to mitigate**. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) **Proper operation and maintenance**. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.

(6) **Permit actions**. This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(7) **Property rights**. This permit does not convey any property rights of any sort, or any exclusive privilege.

(8) **Duty to provide information**. The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

(9) **Inspection and entry**. The permittee shall allow an authorized representative of the Agency or USEPA (including an authorized contractor acting as a representative of the Agency or USEPA), upon the presentation of credentials and other documents as may be required by law, to:
(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance, or as otherwise authorized by the Act, any substances or parameters at any location.

(10) **Monitoring and records**.
(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of this permit, measurement, report or application. Records related to the permittee's sewage sludge use and disposal activities shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503). This period may be extended by request of the Agency or USEPA at any time.
(c) Records of monitoring information shall include:
(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) The date(s) analyses were performed;
(4) The individual(s) who performed the analyses;
(5) The analytical techniques or methods used; and
(6) The results of such analyses.
(d) Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit. Where no test procedure under 40 CFR Part 136 has been approved, the permittee must submit to the Agency a test method for approval. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

(11) **Signatory requirement**. All applications, reports or information submitted to the Agency shall be signed and certified.
(a) **Application**. All permit applications shall be signed as follows:
(1) For a corporation: by a principal executive officer of at least the level of vice president or a person or position having overall responsibility for environmental matters for the corporation:
(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
(b) **Reports**. All reports required by permits, or other information requested by the Agency shall be signed by a person described in paragraph (a) or by a duly authorized representative of that person. A person is a duly authorized representative only if:
(1) The authorization is made in writing by a person described in paragraph (a); and
(2) The authorization specifies either an individual or a position responsible for the overall operation of the facility, from which the discharge originates, such as a plant manager, superintendent or person of equivalent responsibility; and
(3) The written authorization is submitted to the Agency.
(c) **Changes of Authorization**. If an authorization under (b) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of (b) must be submitted to the Agency prior to or together with any reports, information, or applications to be signed by an authorized representative.
(d) **Certification**. Any person signing a document under paragraph (a) or (b) of this section shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(12) **Reporting requirements**.
(a) **Planned changes**. The permittee shall give notice to the Agency as soon as possible of any planned physical alterations or additions to the permitted facility.
Notice is required when:
(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source pursuant to 40 CFR 122.29 (b); or
(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements pursuant to 40 CFR 122.42 (a)(1).
(3) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
(b) **Anticipated noncompliance**. The permittee shall give advance notice to the Agency of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
(c) **Transfers**. This permit is not transferable to any person except after notice to the Agency.
(d) **Compliance schedules**. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(e) **Monitoring reports**. Monitoring results shall be reported at the intervals specified elsewhere in this permit.
(1) Monitoring results must be reported on a Discharge Monitoring Report (DMR).
(2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
(3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.

(f) **Twenty-four hour reporting**. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:
(1) Any unanticipated bypass which exceeds any effluent limitation in the permit.
(2) Any upset which exceeds any effluent limitation in the permit.
(3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.
The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.

(g) **Other noncompliance**. The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).

(h) **Other information**. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.

(13) **Bypass**.
(a) Definitions.
(1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
(2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
(b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).
(c) Notice.
(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (12)(f) (24-hour notice).
(d) Prohibition of bypass.
(1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass, unless:
(i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
(ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
(iii) The permittee submitted notices as required under paragraph (13)(c).
(2) The Agency may approve an anticipated bypass, after considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).

(14) **Upset**.
(a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
(b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
(c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
(1) An upset occurred and that the permittee can identify the cause(s) of the upset;
(2) The permitted facility was at the time being properly operated; and
(3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).
(4) The permittee complied with any remedial measures required under paragraph (4).
(d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

(15) **Transfer of permits.** Permits may be transferred by modification or automatic transfer as described below:
  (a) Transfers by modification. Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
  (b) Automatic transfers. As an alternative to transfers under paragraph (a), any NPDES permit may be automatically transferred to a new permittee if:
    (1) The current permittee notifies the Agency at least 30 days in advance of the proposed transfer date;
    (2) The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage and liability between the existing and new permittees; and
    (3) The Agency does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement.

(16) All manufacturing, commercial, mining, and silvicultural dischargers must notify the Agency as soon as they know or have reason to believe:
  (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant identified under Section 307 of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
    (1) One hundred micrograms per liter (100 ug/l);
    (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6 dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
    (3) Five (5) times the maximum concentration value reported for that pollutant in the NPDES permit application; or
    (4) The level established by the Agency in this permit.
  (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the NPDES permit application.

(17) All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Agency of the following:
  (a) Any new introduction of pollutants into that POTW from an indirect discharge which would be subject to Sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants; and
  (b) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
  (c) For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

(18) If the permit is issued to a publicly owned or publicly regulated treatment works, the permittee shall require any industrial user of such treatment works to comply with federal requirements concerning:
  (a) User charges pursuant to Section 204 (b) of the Clean Water Act, and applicable regulations appearing in 40 CFR 35;
  (b) Toxic pollutant effluent standards and pretreatment standards pursuant to Section 307 of the Clean Water Act; and
  (c) Inspection, monitoring and entry pursuant to Section 308 of the Clean Water Act.

(19) If an applicable standard or limitation is promulgated under Section 301(b)(2)(C) and (D), 304(b)(2), or 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit, or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked, and reissued to conform to that effluent standard or limitation.

(20) Any authorization to construct issued to the permittee pursuant to 35 Ill. Adm. Code 309.154 is hereby incorporated by reference as a condition of this permit.

(21) The permittee shall not make any false statement, representation or certification in any application, record, report, plan or other document submitted to the Agency or the USEPA, or required to be maintained under this permit.

(22) The Clean Water Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Clean Water Act is subject to a civil penalty not to exceed $25,000 per day of such violation. Any person who willfully or negligently violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318 or 405 of the Clean Water Act is subject to a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both.
Additional penalties for violating these sections of the Clean Water Act are identified in 40 CFR 122.41 (a)(2) and (3).

(23) The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

(24) The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(25) Collected screening, slurries, sludges, and other solids shall be disposed of in such a manner as to prevent entry of those wastes (or runoff from the wastes) into waters of the State. The proper authorization for such disposal shall be obtained from the Agency and is incorporated as part hereof by reference.

(26) In case of conflict between these standard conditions and any other condition(s) included in this permit, the other condition(s) shall govern.

(27) The permittee shall comply with, in addition to the requirements of the permit, all applicable provisions of 35 Ill. Adm. Code, Subtitle C, Subtitle D, Subtitle E, and all applicable orders of the Board or any court with jurisdiction.

(28) The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit is held invalid, the remaining provisions of this permit shall continue in full force and effect.

Village of Downers Grove
Contractor Evaluation

Contractor: Clarke Environmental Mosquito Management, Inc.

Project: Mosquito Abatement Services for 2021 (3rd year of 3-year contract)

Primary Contact: Emily Glasberg Phone: 847-421-9117

Time Period: started Jan 1, 2021, and finished December 31, 2021

On Schedule (allowing for uncontrollable circumstances) ☒ Yes ☐ No

Provide details if early or late completion: All work was completed on time and per the mosquito abatement specifications, which included basin and inlet larvicide applications. One Village-wide adulticide spraying occurred plus 2 targeted area sprayings. Total cost $38,880.40

Change Orders (attach information if needed): None

Difficulties / Positives: Clarke was very easy to deal with and I was able to communicate the work needed without any difficulty. Clarke was very prompt in scheduling and notifying when the work would be completed.

Interaction with public:

☐ Excellent ☒ Good ☐ Average ☐ Poor

No comments reported

General Level of Satisfaction with work:

☒ Well Satisfied ☐ Satisfied ☐ Not Satisfied

Reviewers: Kerstin G. von der Heide, Village Forester

Date: January 11, 2022