

Three Rivers Mosquito and Vector Control 651 Market Street Klamath Falls, Oregon 97601-6252 (541) 238-2272 info@trmvc.com www.trmvc.com

INTEGRATED PEST (MOSQUITO) MANAGEMENT PLAN City of South Bend, Washington Updated 30 September 2019

A. Plan Objectives

- 1. Ensure that discharges from mosquito control activities do not cause or contribute to a violation of Water Quality Standards for Surface Water of the State of Washington (chapter 173-201A WAC), Ground Water Quality Standards (chapter 173- 200, WAC), Sediment Management Standards (chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (*40 CFR* 131.36).
- 2. Adequately control adult mosquitoes while minimizing the incidental discharges to waters of concern.
- 3. Document the decision process of where, when, and how mosquito control is implemented within a TRMVC's permit coverage area for the City of South Bend, Washington.

B. General Information

Edward S. Horvath Three Rivers Mosquito and Vector Control Office: (541) 238-2272 Cellular: (541) 880-4791

Physical Address: 651 Market Street Klamath Falls, Oregon 97601-6252

Mailing Address: 651 Market Street Klamath Falls, Oregon 97601-6252

Permit coverage area; Area affecting the City of South Bend, Washington

Map showing permit coverage area (attached)

Emergency reporting (e.g. pesticide exposure or spills to waters of the state) All reportable spills will be reported to CEMTRAC (800) 424-9300

South Bend, Washington Mosquito Control Program







31 December 2018



C. Surveillance

Larval Mosquito Surveillance

Larval mosquito surveillance will be conducted through the use of mosquito dipper counts. Sources are inspected biweekly; mosquito larval counts are obtained and recorded in the GIS data base. Larval surveillance is used to justify larval control. The following minimal information is recorded with each Larval Mosquito Surveillance location:

- 1. GPS location
- 2. Date
- 3. Time

- 6. Average # of larvae present
- 8. Species
- 9. Inspector Name

4. Site Condition

7. Instar

5. # of dips

Post inspections are conducted at each source treated in order to determine efficacy and any non-target affects.

Adult Mosquito General Surveillance

When TRMVC applies pesticides for the control of adult mosquitoes, TRMVC implements an adult mosquito surveillance program. Adult mosquito surveillance that TRMVC includes with our project is, but is not limited to:

- 1. Complaints by residents and City Staff
 - a. Service requests will be utilized to focus control efforts and locate mosquito sources. Requests will be mapped and recorded in the GIS data base and used in conjunction with landing rates and trap counts to justify control operations.
 - b. TRMVC and City staff observations will be incorporated in the surveillance to justify all control operations.
- 2. Historical data
- 3. Landing rate counts, counting and recording the number of female mosquitoes landing on the inspector in 60 seconds.
- 4. Mosquito ID will be conducted by TRMVC to identify the species in order to help pinpoint the sources.
- 5. Mosquito population density, using landing rate counts throughout the control project, mapping the locations of densities and recording the data in a Geographic Information System (GIS database).
- 6. Mosquito trapping (e.g. female mosquito counts) utilizing CDC Light traps when landing rates do not confirm resident complaints.

D. Mapping

TRMVC utilizes ESRI based Geographic Information System (GIS) data bases for all mapping, record keeping and data analysis.

TRMVC implements a mapping/tracking system utilizing GIS and GPS technology to document the following:

- 1. Mosquito breeding sites,
- 2. Mosquito larval inspections,
- 3. Mosquito larval treatment sites,
- 4. Adult mosquito inspections, surveys and landing rates,
- 5. Adult mosquito treatment locations and records,
- 6. No-spray zones including organic farms, beehives, requests for no-spray, etc.,
- 7. Chemically sensitive individuals/properties,
- 8. Properties requested to be on the "opt-out"/"No spray" list,
- 9. Spray buffer zones,
- 10. Any endangered species critical habitats within the coverage area, and
- 11. Other relevant information decided mutually between the City of South Bend and TRMVC.



E. Action Thresholds

Larval Mosquito Action Thresholds

TRMVC conducts larval surveillance prior to any larval control operations. Industry standard mosquito dipper count methods are utilized. Dips are conducted throughout the sources. At least one (1) mosquito larvae is required in three (3) dips, in order to justify larviciding the source.

Adult Mosquito Action Thresholds

TRMVC conducts adult mosquito surveillance as outlined in the above Surveillance Section of this document. TRMVC has established the following thresholds in order to justify adult mosquito control operations.

TRMVC treats for adult mosquito populations when and where mosquito landing rate thresholds meet and/or exceed three (3) mosquitoes per minute. Adult mosquito control will also occur when and where CDC light trap counts meet or exceed three (3) mosquitoes per trapping hour (sunset to sunrise). i.e., if traps are set for five (5) hours, a minimum of fifteen (15) mosquitoes must be present in the light trap. Complaints and service requests alone do not justify control of adult mosquitoes. All complaints and service requests are investigated, surveyed, and adult control is only justified when verified through landing rates and/or CDC light trap counts.

Action Thresholds for pesticide-resistant-mosquito population

Action threshold for any pesticide-resistant-mosquito population remains the same above.

If mosquito populations are not reduced during post-treatment inspections, and it is determined that there is resistance through the conducting of resistance bioassays, TRMVC will request to add an alternate adulticide with another mode of action.

F. Mosquito Control Methods

TRMVC only implements Integrated Mosquito (Pest) Management (IMM) programs. Mosquito control methods that are focused on for the City of South Bend, Washington include:

Physical Control and/or Source Reduction

TRMVC will work with the City of South Bend, Washington to identify mosquito sources that can be reduced or eliminated, thus reducing the need for mosquito control pesticides and provide the City recommendations that can be accomplished by their authority. Any source that can be reduced or eliminated by TRMVC will be addressed by TRMVC staff including dumping standing water and recommending to property owners what they can do to reduce mosquitoes. Door hangers are distributed to homes where standing water is identified on properties that could be easily eliminated by the resident.

City Staff has established a vegetation management plan which will work in conjunction with mosquito control operations. City Staff has also implemented cleaning of storm drains to improve water flow and reduce mosquitoes and the need for mosquito pesticides.

Biological Mosquito Control

Isolated backyard ponds are promoted when properly maintained. Some homeowners have stocked their ornamental ponds with guppies and other goldfish species. City ponds have been stocked with local fish, which have helped reduce mosquito larvae as well as giving residents recreational fishing spots for children. While this could be debated as either biological or pesticide control, TRMVC will utilize *Bacillus thuringiensis israelensis (Bti), Bacillus sphaericus (Bs)* and *Spinosad* as biological pesticides as a primary treatment.



Pesticide-Based Larval Mosquito Control

TRMVC utilizes *Bacillus thuringiensis israelensis (Bti)*, *Bacillus sphaericus (Bs)*, *Spinosad, Monomolecular Films and* Methoprene for larvicides. (Labels attached) All used pesticide labels are available at http://www.sbwmc.com/products-used.html

Catch basins that produce mosquito larvae will be treated with Altosid® XR and/or NatularTM XRT (Labels attached)

Granular and liquid *Bti* formulations are applied with Maruyama and similar blowers. Liquid and water dissolvable granular *Bti* and *Bs* and methoprene are also applied utilizing a 12-volt powered sprayer mounted to both a pick-up truck and an ATV.

All larval control applications are only used in accordance with the label and with justification in accordance with threshold levels.

All equipment is routinely maintained in accordance with the equipment manufactures recommendations and pesticide labels and calibrated to ensure the optimized operational conditions.

Pesticide-Based Adult Mosquito Control

TRMVC utilized a permethrin/PBO pesticide Aqualuer® 20-20. Aqualuer® 20-20 is a water-based adulticide that when applied in accordance with the label, poses little risk to non-target species.

TRMVC applies permethrin at mid to low label rates, as needed, utilizing both an ATV mounted London Fogger MAG and a Clarke model Cougar ULV fogger, with variable flow technology and both equipped with GPS/GIS tracking systems for accurate record keeping.

Foggers are calibrated monthly and after each service, ensuring droplet sizes are within the specifications of the label.

All ULV equipment is routinely maintained in accordance with the equipment manufactures recommendations and pesticide labels and calibrated to ensure the optimized operational conditions.

G. Pesticide Resistance Monitoring

TRMVC conducts resistance/efficacy testing once a year utilizing the bottle bio-assay methods as approved by the Centers for Disease Control. (Guideline for Evaluating Insecticide Resistance in Vectors Using the CDC Bottle Bioassay)

H. Public Education and Outreach

TRMVC produces public information brochures and pamphlets for distribution for our clients. In addition, TRMVC maintains a website for the City of South Bend's Mosquito Control Program (<u>www.sbwmc.com</u>). This website contains information about our products, techniques, schedules, what homeowners can do to reduce mosquitoes around their property and thus reduce pesticide application needs, and documents that are available for public information and request. TRMVC is also including links to sites such as the Washington Department of Ecology and scientific and professional organizations with research and papers on pesticides used, techniques and general mosquito control information.

TRMVC hands out informational doorhangers to help homeowners identify mosquito breeding sites on their own property.

We are also implementing an educational program for South Bend, to teach school aged children how to help reduce mosquitoes themselves, in hopes that they relay it to their parents and neighbors.



I. New Staff Training and Continuing Training for Existing Staff

TRMVC maintains licensing and Continued Education Credits through National, State and local events, training and conferences. All new staff is trained through book work required testing and in the field with hands on training and demonstration, by a trained and qualified supervisor for two (2) or more weeks. New staff is only allowed to work on projects once the new employee has successfully passed State licensing exams and have demonstrated their ability to professionally conduct mosquito control surveillance and control operations.

J. Record Keeping and Reporting

TRMVC maintains records for all inspections/surveys and treatments utilizing a GIS database and linked to GIS shapefiles. The following information (and more) is recorded and retained for 5 years:

- 1. Location by GPS
- 2. Date
- 3. Time

K.

4. Equipment type

Signature Requirement

5. Amount used

7. Area treated

6. Active ingredients

- 8. Weather data
- 9. Technician
- 10. Larval Counts

- 11. Number of Dips
- 12. Species
- 13. Adult Counts

"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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information in the IPM is, to the best of my knowledge and belief, true, accurate, and complete and will be updated as necessary. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Unless the Department of Ecology Permit has more stringent requirements, all FIFRA label directions and requirements will be followed."

Edward S Horvath Name

Owner/Vector Ecologist Title

nature

30 September 2019 Date



Pesticide Labels

AllPro

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 Synergized Permethrin Formulation

- For Effective Control of Adult Mosquitoes (including organophosphate resistant mosquitoes), Midges (Biting and Non-Biting) and Blackflies For ULV, Thermal and Barrier Applications using Ground and Aerial Equipment for
- control of Adult Mosquitoes and other biting flies. Formulation Allows Dilution with Water or Oil.

ACTIVE INGREDIENTS:

*Permethrin	20.6%
**Piperonyl Butoxide	20.6%
OTHER INGREDIENTS:	58.8%
TOTAL:	100.0%
*(3 phenoxyphenyl) methyl (+/) Cis/trans 3 (2.2 dichloroethenyl) 2.2 Dime	thyl cyclo

propanecarboxylate. Cis/trans ratio: min. 35% (+/-) cis and max. 65% (+/-) trans. **(butylcarbityl)(6-propylpiperonyl) ether and related compounds

Contains 1.75 pounds of Permethrin and 1.75 pounds of Piperonyl Butoxide per gallon.

KEEP OUT OF REACH OF CHILDREN DANGER - PELIGRO

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente. (To the User: If you cannot read English, do not use this product until the label has been fully explained to you).

First Aid			
If In Eyes:	 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 eye. Call a poison control center or doctor for treatment advice. 		
If on skin or clothing:	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.		
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 by mouth to an unconscious person. 		
Have the prod center or doct emergency me	luct container or label with you when calling a poison control or, or going for treatment. You may also call 1-800-858-7378 for edical treatment advice.		

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic Animals

DANGER: Corrosive. Causes irreversible eye damage. Causes skin irritation. Do not get in eyes, on skin, or on clothing. Harmful if absorbed through skin, Harmful if swallowed. Prolonged or frequently repeated skin contact may cause allergic reations in some individuals.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, nitrile rubber, neoprene rubber, and viton. If you want more options, follow the instructions for category E on an EPA chemical-resistance category selection chart. Mixers, loaders, applicators, and other handlers must wear:

- Coveralls worn over short-sleeved shirt and short pants; Goggles or face shield;
- Chemical-resistant footwear plus socks;
- Chemical-resistant gloves made of any waterproof material (except for applicators using motorized ground equipment, pilots, and flaggers); and
- Chemical-resistant apron for mixers, loaders, persons cleaning equipment and persons exposed to the concentrate.
- See Engineering Controls for additional requirements.

Aqualuer[®] 20-20

USER SAFETY REQUIREMENTS

Follow manufacturer's instruction 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.

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 application is limited to the use of the Global Positioning System (GPS) or mechanical flaggers.

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. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to aquatic organisms, including fish and invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates.

When applying as a wide area mosquito adulticide, 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.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are visiting the treatment area.

When applying as a wide area mosquito adulticide, 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.

PHYSICAL AND CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flame. Keep away from oxidizers.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. HOW TO APPLY AND WHERE TO USE

Aqualuer 20-20 is designed for application as an Ultra-Low Volume (ULV) or thermal aerosol to control adult mosquitoes and flies of nuisance, public health or disease vector importance in areas including residential areas, industrial areas, commercial areas, urban areas, parks, camp-grounds, woodlands, athletic fields, golf courses, playgrounds, recreational areas, overgrown waste areas, roadsides, and other areas where adult mosquitoes and flies may be found.

Apply Aqualuer 20-20 with ULV cold aerosol generators, thermail aerosol generators, mistblowers, backpack sprayers, or handheld sprayers. Backpack sprayers, handheld sprayers and low-pressure hand sprayers may be used for barrier or surface applications.

Treat when mosquitoes or insects are most active and weather conditions are conducive to Receiping the fog near the ground e.g. cool temperatures, and consistent wind speeds are not greater than 10 mph. Applications during the cool hours of night or early morning are usually preferable. Apply when wind speed is greater than 1 mph.

Do not retreat the same site more than once in 3 days. Do not exceed 25 applications at 0.007 lbs permethrin and 0.007 lbs PBO per acre per application, or 0.18 lbs of permethrin per acre per season and 0.18 lbs PBO per acre per year. More frequent treatments 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-bourne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

Aqualuer 20-20 can be applied over specific growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas. Application can only be made where the following crops are present: Almonds, Apples, Broccoli, Brussels sprouts, Cabbage, Celery, Cauliflower, Cherries, Corn (fodder), Corn (forage), Corn (grain), Eggplant, Leafy Vegetables (except Brassica) (leafy amaranth, arugula, cardoon, celery, (grain), figgplain, teary vegetables (except brassica) (teary antaratin, a uguna, cartooba, cere celtuce, chervil, chrysanthemum, corn salad, garden & upland cress, dandelion leaves, dock, endive, fennel, sea kale, head & leaf lettuce, orach, parsley, garden and winter purslane, radic-chio, rhubarb, spinach, Swiss chard, and tampala), Lettuce (head), Mushrooms, Onions (dry bulb), Peaches, Pears, Peppers (bell), Soybeans, Tomatoes, Vegetables (cucubit: balsam apple, balsam pear, cantaloupe, fruit chayote, cucumber, cucurbits, West Indian gherkin, ediba gourd, melon, muskmelon, pumpkin, squash, watermelon, Chinese waxgourd), Walnuts

Do not allow spray treatment to drift on cropland (other than crops listed) or water supplies. In treatment of corrals, feedlots, animal confinements/houses, swine lots and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.

Air temperatures should be greater than 50° F when conducting all types of applications. **Aqualuer 20-20** provides effective control of adult mosquitoes, black flies, gnats, biting and non-biting midges, stable flies, horse flies, deer flies, sheep flies, horn and heel flies, and nuisance flying insects such as houseflies.

Do not make applications during rain. Do not apply directly to sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur, except as directed by this label.

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

GROUND APPLICATION

Vehicle-Mounted ULV Cold Aerosol Generators (Cold Fog): Apply through non-thermal ULV application equipment and base all acreage calculations on the equipment manufacturer's recommended swath width.

Spray equipment must be adjusted so the volume median diameter or mass median diameter is less than 30 microns (Dv 0.5 < 30 mm) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 mm). 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.

Apply at a rate not to exceed 0.007 pounds of permethrin per acre. An optimum swath is created when **Aqualuer 20-20** is applied from a truck being driven perpendicular to the wind direction. Direct the spray head of the equipment to ensure an optimum distribution of the spray cloud throughout the area. For best results, apply when insects are most active and meteorological conditions are conducive to keeping the spray cloud near the ground. An inversion of air temperatures and a light breeze of approximately 1 to 3 mph is preferable. During applications consistent ground wind speeds should not exceed 10 mph. Application of this product during cooler hours of the night or early morning is recommended.

Aqualuer 20-20 may be applied through all ULV Cold Aerosol Generators, or other similar equipment designed for non-thermal ULV aerosol applications. The desired application rate may be obtained from the chart below or by altering the dilution rate of Aqualuer 20-20, the flow rate of the insecticide from the application equipment and the vehicle speed. Some examples are provided in the following chart. When an alternate rate is required, adjust the flow rate accordingly, provided the droplet size and spectrum remain within the label specifications.

FLOW RATE (Fluid Ounces Per Minute)						
	Dilutions Based on a 15 Gallon Tank*					
Application Rate (Pounds of Permethrin a.i./ Acre)	Vehicle Speed (MPH)	Undiluted	Diluted 1: 3	Diluted 1: 4.5	Diluted 1: 6.5	Diluted 1: 9
0.0015	10 15 20	0.7 1.05 1.4	2.8 4.2 5.6	3.7 5.5 7.3	5.25 7.88 10.50	6.7 10.0 14.0
0.0035	10 15 20	1.55 2.35 3.1	6.2 9.3 12.5	8.6 12.8 17.2	11.7 17.5 23.4	15.6 23.3
0.007	10 15 20	3.1 4.65 6.2	12.4 18.6 24.7	17.0 25.5	23.2	

*Dilution Instructions: Fill tank with the recommended amount of water, start agitation then add Diducin instructions: in tark with recommended amount of water, start agriation then the correct amount of **Aqualuer 20-20**. The use of metering pumps, injector systems or other mixing systems is optional. Note: When using oil as a diluent agitate well before use.

Where dense vegetation is present, use higher rates of application and/or a slower speed for best results

Backpack or Handheld Sprayer Application: Apply through non-thermal ULV application equipment and base acreage calculations on a 300-foot swath. To apply undiluted at 0.007 pounds of permethrin per acre adjust equip-ment to an output rate of 1.24 ounces per minute and walk at 4 mph. To apply 0.0035 pounds of permethrin per acre, dilute 1 part **Aqualuer 20-20** with 5 parts of diluent and apply at a rate of 3.8 ounces per minute and walk at 4 mph.

Thermal Aerosol Application: For use in truck-mounted, handheld or other thermal fogging equipment. Spray equipment must be adjusted so the volume median diameter or mass median diameter is less than 30 microns (Dv 0.5 < 30 m) and that 90% of the spray is contained in droplets smaller than 48 microns (Dv 0.9 < 48 m). 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 tracked at last a numble. must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated. Apply this product mixed with water or oil at a rate not to exceed 0.007 lbs. per acre. Base acreage calculations on a 300 feet swath. For best results, direct the thermal fog into and allow to drift through areas where adult mosquitoes are found.

Barrier Applications: To exclude and control resting or flying adult mosquitoes in areas such as animal quarters, roadsides, urban areas, residential areas, commercial areas, industrial areas, golf courses, parks, recreational areas, tire piles and all public areas where adult mosquitoes occur or find harborage. May be used to treat aggregation and harborage areas such as the perimeter of residential buildings, commercial buildings, storage buildings, crawl spaces, transport trailers, abandoned or uninhabited buildings and other areas where adult mosquitoes find harborage.

When this product is applied as a barrier application, do not apply within 100 feet (30 meters) of lakes and streams

To apply this product using low pressure hand sprayers or other similar equipment, for the control of mosquitoes on resting or aggregation surfaces mix 0.126 oz. (3.73 ml) in one gallon of water and apply sufficient spray to dampen the surface—approximately 700-750 square feet of treated area. Use equipment that is capable of delivering an even distribution of the labeled rate over the treatment area.

For application using backpack or truck-mounted low-pressure direct spray, non-ULV equip-ment, apply *Aqualuer 20-20* undiluted at a rate not to exceed 7.3 oz. per acre. If diluted apply at a rate not to exceed 0.1 lbs. permethrin a.i. per acre. Diluted or undiluted applications may be made into foliage at the perimeter of areas such as recreational areas, parks, or golf courses from which mosquitoes or flies are to be excluded. Applications may be directed into harborage areas or other resting areas where adult mosquitoes or flies may be found. Do not apply more than 0.18 lbs. permethrin a.i. per year to the same site.

Urban ULV Mosquito Control Applications: For control of resting or flying adult mosquitoes, biting flies and biting midges in harborage areas such as but not limited to utility tunnels, sewers, storm drains and catch basins, pipe tunnels, basements, underground passages, parking decks, 20-20 diluted or undiluted using mechanical fogers, hand-held or truck-mounted ULV equipment, thermal foggers or other spray equipment suitable for this type of application. Aqualuer 20-20 may be applied at rates up to but not exceeding 0.007 lbs. permethrin per acre.

AERIAL APPLICATION

Apply Aqualuer 20-20 either diluted or undiluted at rates up to 0.007 lbs. permethrin/PBO per acre by fixed wing or rotary aircraft equipped with a spraying system capable of making a ULV application.

Aerial application of Aqualuer 20-20 shall be made at altitudes randing from 75 feet to 300 feet. Do not apply by fixed wing aircraft at a height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.

Do not apply when ground wind speed exceeds 10 mph. Aerial applications of Aqualuer 20-20 shall only be made when recommended by public health officials and trained personnel of mosquito abatement districts and other mosquito control programs.

For best results, apply Aqualuer 20-20 when insects are most active and meteorological conditions are conducive to keeping the spray cloud near the ground. Aerial applications using aircraft equipped with global positioning systems (GPS) may be needed to compensate for windy conditions and to ensure drift into target areas.

IN FLORIDA: Do not apply by aircraft unless approved by the Florida Department of Agriculture and Consumer Services

Aerial Application made at \leq 200 feet above ground elevation: Use ULV equipment and nozzles such as rotary atomizers as similar

Use ULV equipment and nozzles such as rotary atomizers or similar spray equipment. Spray equipment must be adjusted so the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 μ m) and that 90% of the spray is contained in droplets smaller than 100 microns (Dv 0.9 < 145 μ m). The effects of flight speed and, for non-rotary nozzles, 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 measure-ment 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 Application made at > 200 feet above ground elevation:

Use ULV equipment and nozzles such as rotary atomizers or similar spray equipment. Spray equipment must be adjusted so the volume median diameter produced is less than 70 microns $(Dv 0.5 < 70 \ \mu m)$ and that 90% of the spray is contained in droplets smaller than 145 microns (Dv 0.9 < 145 \ \mu m). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equiment manufacturer or vendor, pesticide registrant or a test facility using using a wind tunnel and laser-based measure-ment 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.

STORAGE AND DISPOSAL

Do not contaminate water food or feed by storage or disposal. **Pesticide Storage and Spill Procedures:** Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

Postcicle Disposal: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility. Container Handling:

Nonrefillable container: Do not reuse or refill this container. Triple rinse or pressure rinse container promptly after emptying. **Containers** \leq **5 gallons**: 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 container 1/4 full with water and recap. Shake for 10 seconds after the flow begins to drip. Fill container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix 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. **Containers** > **5 gallons**: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure Rinse as Follows:** Empty the remining contents into application equip-ment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure-rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seonds. Drain for 10 seconds after the flow begins to drip. Offer for recyling, if available.

READ ENTIRE LABEL BEFORE USING

Read the entire **Directions for Use, Conditions, Disclaimer of Warranties, and Limitation of Liability** before using this product. By using this product, User and Buyer accept the fol-lowing Conditions and Disclaimer.

CONDITIONS: The Directions for Use of this product are believed to be adequate and should be followed carefully. HOwever it is impossible to eliminate all risks associated with the use of this product. Injury, ineffectiveness or other uninteneded consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use orr application, all of which are beyond the control of **Value Garden Supply**. All such risks shall be assumed by the User or Buyer.

DISCLAIMER: Value Garden Supply warrants that this product conforms to the chemi-cal description on the label and is reasonably fit for the specific purposes fererred to in the Directions For Use, subject to the inherent risks referred to above. To the extent provided by law, Value Garden Supply makes no other express or implied warranty of fitness or merchant-ability nor any other express or implied warranty. To the extent provided by law Value Garden Supply shall not be liable for any consequential, special, or indirect damages resulting from the use handling or amplication of this product. the use, handling or application of this product.

EPA Reg. No 769-985 EPA Est. No. 44616-MO-1

Value Garden Supply P.O. Box 585 St. Joseph, MO 64502 (248) 773-7460 www.allprovector.com RM# 22039-9-13

AGNIQUE® MMF Mosquito larvicide & pupicide

Monomolecular Surface Film for Control of Immature Mosquitoes and Midges

CAN BE USED IN: • Habitats Containing Birds, Fish, Pets and Wildlife • Ponds • Pools • Ditches • Irrigation Water • Potable Water Containers • Flood Water Areas • Other Areas Where Mosquitoes Breed and Develop

ACTIVE INGREDIENT

Poly (oxy-1,2-ethanediyl), α -lsooctadecyl- ω -hydroxyl (100%)

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID (TREATMENT)

IF ON SKIN OR Clothing:	 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.
IF IN EYES:	 Hold eye open and rinse slowly and gently with plenty of water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. 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.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMAN AND DOMESTIC ANIMALS

CAUTION: Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. **Pesticide Storage:** Do not allow storage containers to rust. Rust contaminants may clog spray nozzles. Do not allow product to freeze.

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: Triple rinse, then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state or local authorities.

This product may be applied by both ground and aerial applications. To use, calculate the desired rate based on water surface area. The water depth is not a factor in rate determination. Spray the desired rate of neat AGNIQUE® MMF onto the surface of the water. No dilution is required and a fan spray is recommended. The MMF will spread to cover hard to access areas. For large areas with dense vegetation it is recommended that application is made in several locations to assist in the spreading action. Do not pour or inject a stream spray directly into water. AGNIQUE® MMF is not visible on the surface of the water. Excess MMF on the water surface will form a white globule.

APPLICATION DIRECTIONS

APPLICATION SITES

This product is for the control of immature mosquitoes and midges in areas where they breed and develop. This product may be used in habitats including potable water and irrigation waters, permanent and semi-permanent waters, irrigated croplands and pastures, and waters with outlets to natural water bodies. The following habitats provide examples of where the product can be applied but is not intended to be all inclusive. **Fresh and Brackish Water:** Fresh water and salt marshes, ponds, lakes, storm water, drainage systems and retention & detention basins, roadside ditches, grassy swales, flooded fields and pastures, potable water containers, reservoirs, irrigated croplands, temporary and semi-permanent woodland pools, tidal water, and other areas where water accumulates. **Residential Areas:** Ponds, storm water basins, tree holes, rain barrels, landscape and ornamental ponds, tires, storm drains, stationary flower pots, pot holes, gutters, tarps, potable water containers and residential areas where water accumulates and

containers and residential areas where water accumulates and persis: provides ideal breeding habitats for mosquitoes or midges. will c Polluted Waters: Sewage lagoons, percolation ponds, animal waste effluent lagoons, septic ditches, waste treatment facility areas, etc. betw

MOSQUITO HABITAT	Suggested Rate Range
Fresh and Brackish Water*	0.2 – 1.0 gallons/acre (2 – 10 liters/hectare)
Polluted Waters**	0.35 – 1.0 gallons/acre (3.5 – 10 liters/hectare)
MIDGE HABITAT	Suggested Rate Range^
Fresh and Polluted Waters	0.5 – 1.0 gallons/acre (5 – 10 liters/hectare)

* The lower rate (0.2 gallons/acre) is recommended when only pupae control is desired and in sites with no emergent vegetation and low organic content.

- ⁴ Use higher rates when emergent or surface vegetation is present, due to the wicking action of the product. The more vegetation or the drier the vegetation, the higher the required rate.
- ** Use higher rates in polluted water habitats for effective control.
- ^ Reapplication is recommended every two weeks during the midge season.

DIRECTIONS FOR USE

Net Contents:

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. To be used in governmental mosquito

control program, by professional pest control operators, by homeowners, or in other mosquito or midge control operations.

12 x 1 Liter Bottles

2 x 2.5 Gallon Jugs

APPLICATION NOTES

Rate of Kill: The rate of kill when using MMF is dependent on the species, the life stage, the habitat and the temperature. Pupicidal action will typically result in 24 hours. Larvicidal action will usually result in 24-96 hours. If the film is present, as indicated by the indicator oil, control will be achieved. **Persistence:** The AGNIQUE® MMF surface film typically persists on the water's surface for 5 to 22 days. Polluted waters will cause more rapid degradation of the film. Higher application rates will prolong film life and extend the interval between retreatment. **Species:** Mosquitoes and midges that require little or no surface

Species: Mosquitoes and midges that require little or no surface contact for breathing will be affected by the product during the pupae and emerging adult life stages.

Wind: The high end of the dosage rate is recommended when spraying habitats where multi-directional winds of 10mph (16km/hr) or greater are expected to persist. While the film will be pushed by the winds, it will re-spread quickly once the winds have subsided. If persistent unidirectional winds of 10 mph (16km/hr) or greater are expected, the displacement of the surface film may result in poor control.

NOTICE

Cognis Corporation makes no warranty, express or implied of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risks, storage or handling not in strict accordance with the label.

For information on this pesticide product (including health) concerns, medical emergencies or pesticide incidents, call the National Pesticide Telecommunication Network at 1-800-858-7378.

on this Cognis Corporation t (including 4900 Este Avenue s, medical Cincinnati, OH 45232-1419 e National 1-800-254-1029

C Gnis. we know how

EPA Reg.No.53263-28 EPA Establishment No.70815–GA-001



an unspravable paste.

STOP MOSQUITOES BEFORE THEY START

MIX MMH in water. Expanding Waters: Significant expansion of the habitat's surface due to rain or tidal fluxes can be compensated for by using a dosage that is based on the largest expected surface area. This will ensure complete coverage, and eliminate the need for re-treatment of the flooded area.

Spray Tanks: Thoroughly clean and dry the spray system of

contaminants such as petroleum oils, water, detergents and

Detergents will destroy the film-forming of the AGNIOUE® MMF

other contaminants (water and oil) can result in the formation of

Dilution: AGNIQUE® MMF is typically applied to the water's

conventional toxicants prior to adding AGNIQUE® MMF.

Altosid Liquid Larvicide MOSQUITO GROWTH REGULATOR

PREVENTS EMERGENCE OF ADULT FLOODWATER MOSQUITOES



ACTIVE INGREDIENT:

(S)-Methoprene* OTHER INGREDIENTS:		5% 95%
	Total	100%

* CAS # 65733-16-6

Formulation contains 0.43 lb/gal (51.3 g/liter) active ingredient.

EPA Reg No. 2724-392

KEEP OUT OF REACH OF CHILDREN CAUTION SEE ADDITIONAL PRECAUTIONARY STATEMENTS

Because of the unique mode of action of A.L.L.[™], successful use requires familiarity with special techniques recommended for application timing and treatment evaluation. See Guide to Product Application or consult local Mosquito Abatement Agency.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling.

FIRST AID

If in eyes • 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 eye. • 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 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of equipment washwaters or rinsate.

DIRECTIONS FOR USE

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

CHEMIGATION

Refer to supplemental labeling entitled "Guide to Product Application" for use directions for chemigation. Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed.

MIXING AND HANDLING INSTRUCTIONS

- 1. SHAKE WELL BEFORE USING. **A.L.L.** may separate on standing and must be thoroughly agitated prior to dilution.
- 2. Do not mix with oil; use clean equipment.
- 3. Partially fill spray tank with water; then add the recommended amount of **A.L.L.**, agitate and complete filling. Mild agitation during application is desirable.
- 4. Spray solution should be used within 48 hours; always agitate before spraying.

APPLICATION INSTRUCTIONS

INTRODUCTION

A.L.L. must be applied to 2nd, 3rd, or 4th larval instars of floodwater mosquitoes to prevent adult emergence. Treated larvae continue normal development to the pupal stage where they die. This insect growth regulator has no effect when applied to pupae or adult mosquitoes. **A.L.L.** has sufficient field life to be effective at appropriate rates when applied to larval stages under varying field conditions. For further information, see Guide to Product Application.

METHODS OF APPLICATION

AERIAL

Use the prescribed amount of **A.L.L**. listed below in sufficient water to give complete coverage. One-half to 5 gallons of spray solution per acre is usually satisfactory. Do not apply when weather conditions favor drift from areas treated.

GROUND

Determine the average spray volume used per acre by individual operators and/or specific equipment. Mix **A.L.L.** in the appropriate volume of water to give the rate per acre as indicated below.

APPLICATION RATE

Apply 3 to 4 fl oz of **A.L.L.** per acre (219 to 293 ml/hectare) in water as directed.

APPLICATION SITES

PASTURES

A.L.L. may be applied after each flooding without removal of grazing livestock.

RICE

A.L.L. must be applied to 2nd, 3rd, and/or 4th instar larvae of mosquitoes found in rice, usually within 4 days after flooding. **A.L.L.** treatment may be repeated with each flooding.

INTERMITTENTLY FLOODED NONCROP AREAS

A.L.L. may be applied as directed above when flooding may result in floodwater mosquito hatch.

Typical sites include freshwater swamps and marshes, salt marshes, woodland pools and meadows, dredging spoil sites, drainage areas, waste treatment and settling ponds, ditches and other natural and manmade depressions.

CROP AREAS

A.L.L. may be applied to irrigated croplands after flooding to control mosquito emergence. Examples of such sites are: vineyards, rice fields (including wild rice), date palm orchards, fruit and nut orchards, and berry fields and bogs. Irrigated pastures may be treated after each flooding without the removal of grazing livestock.

DENSE VEGETATION OR CANOPY AREAS

Apply an **A.L.L.** sand or BIODAC mixture using standard granular dispersal equipment. For detailed preparation instructions, refer to Guide to Product Application.

STORAGE AND DISPOSAL

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

STORAGE

Store in cool place. Store product away from other pesticides, food, and feed. In case of leakage or spill, soak up with sand or another absorbent material.

CONTAINER DISPOSAL

Triple rinse or equivalent. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

PESTICIDE DISPOSAL

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

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

Always read the label before using the product.

For information, call 1-800-248-7763 or visit our Web site: www.altosid.com





Wellmark International Schaumburg, Illinois U.S.A.

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23-24-043

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A GRANULAR PRODUCT TO PREVENT ADULT MOSQUITO EMERGENCE (INCLUDING THOSE WHICH MAY TRANSMIT WEST NILE VIRUS)



ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6)	4.25%
OTHER INGREDIENTS:	95.75%
Total	100.00%

EPA Reg No. 2724-448 EPA Est. No. 39578-TX-1

KEEP OUT OF REACH OF CHILDREN CAUTION

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

FIRST AID		
Call a poison control center or doctor for treatment advice.		
If in eyes	 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 eye. 	
If on skin	• Take off contaminated clothing.	
or clothing	 Rinse skin immediately with plenty of water for 15-20 minutes. 	
Have the p	roduct container or label with you when	

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of rinsate or equipment washwaters.

DIRECTIONS FOR USE

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

INTRODUCTION

ZOËCON® ALTOSID® Pellets (**ALTOSID® Pellets**) release **ALTOSID®** Insect Growth Regulator as they erode. **ALTOSID® Pellets** prevent the emergence of adult standing water mosquitoes, including *Anopheles*, *Culex*, *Culiseta*, *Coquillettidia*, and *Mansonia* spp., as well as adults of the floodwater mosquitoes such as *Aedes*, *Ochlerotatus*, and *Psorophora* spp. from treated sites.

GENERAL DIRECTIONS

ALTOSID® Pellets release effective levels of **ALTOSID®** Insect Growth Regulator for up to 30 days under typical environmental conditions. Continue treatment through the last brood of the season. Treated larvae continue to develop normally to the pupal stage where they die. **NOTE:** This insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

APPLICATION SITES AND RATES

Use lower application rates when water is shallow, vegetation and/or pollution are minimal, and insect populations are low. Use higher rates when water is deep (>2 ft), vegetation, pollution, and/or organic debris or water flow are high, and insect populations are high. In instances of high organic debris and water flow, residual activity may be diminished.

MOSQUITO HABITAT	RATE (LB/ACRE)
Floodwater sites Pastures, meadows, rice fields, freshwater swamps and marshes, salt and tidal marshes, cattail marshes, woodland pools, flood- plains, tires, other artificial water-holding containers	2.5-5
Dredging spoil sites, waste treatment and settling ponds, ditches and other manmade depressions	5–10
Permanent water sites Ornamental ponds and fountains, fish ponds, cattail marshes, water hyacinth beds, flooded crypts, transformer vaults, abandoned swimming pools, construction and other manmade depressions, treeholes, other artificial water- holding containers	2.5-5
Storm drains, catch basins, roadside ditches, cesspools, septic tanks, waste settling ponds, vegetation-choked phosphate pits	5–10

APPLICATION METHODS

Mosquitoes: Apply **ALTOSID**[®] **Pellets** up to 15 days prior to flooding, or at any stage of larval development after flooding or in permanent water sites. Fixed wing aircraft or helicopters equipped with granular spreaders capable of applying rates from 2.5 to 10 lb/acre may be used to apply **ALTOSID**[®] **Pellets**. The pellets may also be applied using ground equipment which will achieve good, even coverage at the above rates. Apply **ALTOSID**[®] **Pellets** to artificial containers such as tires and catch basins, etc.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Store closed containers of **ALTOSID® Pellets** in a cool, dry place.

PESTICIDE DISPOSAL

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

CONTAINER HANDLING

Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent). Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE

Seller makes no warranty, expressed or implied, concerning the use and handling of this product other than indicated on the label. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

For information or in case of an emergency, call **1-800-248-7763**.

www.altosid.com

Wellmark International

1501 East Woodfield Road 200W Schaumburg, Illinois 60173



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Altosid R EXTENDED RESIDUAL BRIQUETS



A SUSTAINED RELEASE PRODUCT TO PREVENT ADULT MOSQUITO EMERGENCE



ACTIVE INGREDIENT:

(S)-Methoprene (CAS #65733-16-6)	
(Dry Weight Basis)	2.1%
OTHER INGREDIENTS:	97.9%
Total	100.0%

This product contains water; therefore the weight of the briquet and percent by weight of active ingredient will vary with hydration. The ingredient statement is expressed on a dry weight basis.

EPA Reg No. 2724-421

KEEP OUT OF REACH OF CHILDREN CAUTION

INTRODUCTION

ALTOSID[®] XR BRIQUETS are designed to release effective levels of methoprene insect growth regulator over a period up to 150 days in mosquito breeding sites. Release of methoprene insect growth regulator occurs by dissolution of the briquet. Soft mud and loose sediment can cover the briquets and inhibit normal dispersion of the active ingredient. The product may not be effective in those situations where the briquet can be removed from the site by flushing action.

ALTOSID XR BRIQUETS prevent the emergence of adult mosquitoes including: Anopheles, Culex, Culiseta, Coquillettidia, and Mansonia spp., as well as those of the floodwater mosquito complex (Aedes and Psorophora spp.) from treated water. Treated larvae continue to develop normally to the pupal stage where they die.

NOTE: Methoprene insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic dipteran. Using it in a manner other than that described by the label could result in harm to aquatic dipteran. Do not contaminate water when disposing of rinsate or equipment washwaters.

DIRECTIONS FOR USE

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

APPLICATION TIME

Placement of ALTOSID XR BRIQUETS should be at or before the beginning of the mosquito season. ALTOSID XR BRIQUETS can be applied prior to flooding when sites are dry, or on snow and ice in breeding sites prior to spring thaw. Under normal conditions, one application should last the entire mosquito season, or up to 150 days, whichever is shorter. Alternate wetting and drying will not reduce their effectiveness.

APPLICATION RATES

Aedes and Psorophora spp.: For control in non-(or low-) flow shallow depressions (≤2 feet in depth), treat on the basis of surface area, placing 1 briquet per 200 ft². Briquets should be placed in the lowest areas of mosquito breeding sites to maintain continuous control as the site alternately floods and dries up.

Culex, Culiseta, and *Anopheles* spp.: Place one ALTOSID XR BRIQUET per 100 ft².

Coquillettidia and *Mansonia* spp.: For application to cattail marshes and water hyacinth beds. For control of these mosquitoes, place one briquet per 100 ft².

Culex sp. in storm water drainage areas, sewers, and catch basins: For catch basins, place 1 briquet into each basin. In cases of large catch basins, follow the chart below to determine the number of briquets to use. For storm water drainage areas, place 1 briquet per 100 feet square of surface area up to 2 ft deep. In areas that are deeper than 2 feet, use 1 additional briquet per 2 feet of water depth.

Large water flows may increase the dissolution of the briquet thus reducing the residual life of the briquet. Regular inspections (visual or biological) in areas of heavy water flow may be necessary to determine if the briquet is still present. The retreatment interval may be adjusted based on the results of an inspection.

Number of Briquets	Catch Basin Size (Gallons)	Surface Area/ Water Depth (ft)
1	0 – 1500	0 – 2
2	1500 – 3000	2 – 4
3	3000 - 4500	4 – 6
4	4500 - 6000	6 – 8

APPLICATION SITES

ALTOSID XR BRIQUETS are designed to control mosquitoes in treated areas. Examples of application sites are: storm drains, catch basins, roadside ditches, fish ponds, ornamental ponds and fountains, other artificial water-holding containers, cesspools and septic tanks, waste treatment and settling ponds, flooded crypts, transformer vaults, abandoned swimming pools, tires, construction and other manmade depressions, cattail marshes, water hyacinth beds, vegetation-choked phospate pits, pastures, meadows, rice fields, freshwater swamps and marshes, salt and tidal marshes, treeholes, woodland pools, floodplains, and dredging spoil sites. For application sites connected by a water system, i.e., storm drains or catch basins, all of the water-holding sites in the system should be treated to maximize the efficiency of the treatment program.

STORAGE AND DISPOSAL

STORAGE

Store in a cool place. Do not contaminate water, food, or feed by storage or disposal. Do not reuse empty container.

DISPOSAL

Dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE

Seller makes no warranty, express or implied, concerning the use and handling of this product other than indicated on the label. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

For information, or in case of an emergency, call 1-800-248-7763 or visit our Web site: www.altosid.com.



Wellmark International Schaumburg, Illinois U.S.A.

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November 2000 Schaumburg, IL

A COSC XR EXTENDED RESIDUAL BRIQUETS



Supplemental Labeling

All label restrictions and Directions for Use of Altosid® XR Extended Residual Briquets apply. Now Labeled for use in known fish habitats.

ACTIVE INGREDIENTS:

*US patents: 3,904,662 and 3,912,815

This product contains water, therefore the weight of the briquet and percent by weight of active ingredient will vary with hydration. The ingredient statement is expressed on a dry weight basis.

> KEEP OUT OF REACH OF CHILDREN CAUTION

EPA Reg. No. 2724-421-64833

INTRODUCTION: ALTOSID[®] XR Briquets are designed to release effective levels of methoprene insect growth regulator over a period up to 150 days in mosquito breeding sites. Release of methoprene insect growth regulator occurs by dissolution of the briquet. Soft mud and loose sediment can cover the briquets and inhibit normal dispersion of the active ingredient. The product may not be effective in those situations where the briquet can be removed from the site by flushing action.

ALTOSID XR Briquets prevent the emergence of adult mosquitoes including Anopheles, Culex, Culiseta, Coquillettidia, and Mansonia spp.as well as those of the floodwater mosquito complex (Aedes and Psorophora spp.) from treated water. Treated larvae continue to develop normally to the pupal stage where they die.

NOTE: Methoprene insect growth regulator has no effect on mosquitoes which have reached the pupal or adult stage prior to treatment.

PRECAUTIONARY STATEMENTS

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic dipteran. Using it in a manner other than that described by the label could result in harm to aquatic dipteran. Do not contaminate water when disposing of rancid or equipment washwaters.

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

APPLICATION TIME: Placement of ALTOSID XR Briquets should be at or before the beginning of the mosquito season. ALTOSID XR Briquets can be

applied prior to flooding when sites are dry, or on snow and ice in breeding sites prior to spring thaw. Under normal conditions, one application should last the entire mosquito season, or up to 150 days, whichever is shorter. Alternate wetting and drying will not reduce their effectiveness.

APPLICATION RATES: Aedes and Psorophora spp.: For control in non-for lowflow shallow depressions (≤ 2 feet in depth), treat on the basis of surface area, placing 1 methoprene briquet per 200 ft². Briquets should be placed in the lowest areas of mosquito breeding sites to maintain continuous control as the site alternately floods and dries up.

Culex, Culiseta and Anopheles spp.: Place one ALTOSID XR Briquet per 100 ft 2 .

Coquillettidia and Mansonia spp.: For application to cattail marshes and water hyacinth beds. For control of these mosquitoes, place one briquet per 100 ft².

APPLICATION SITES: ALTOSID XR Briquets are designed to control mosquitoes in treated areas. Examples of application sites are: storm drains, catch basins, roadside ditches, fish ponds, ornamental ponds and fountains, other artificial water-holding containers, cesspools and septic tanks, waste treatment and settling ponds, flooded crypts, transformer vaults, abandoned swimming pools, tires, construction and other manmade depressions, cattail marshes, water hyacinth beds, vegetation-choked phosphate pits, pastures, meadows, rice fields, freshwater swamps and marshes, salt and tidal marshes, treeholes, woodland pools, floodplains, and dredging spoil sites. For application sites connected by a water system, i.e., storm drains or catch basins, all of the water holding sites in the system should be treated to maximize the efficiency of the treatment program.

STORAGE AND DISPOSAL:

STORAGE: Store in a cool place. Do not contaminate water, food, or feed by storage or disposal. Do not reuse empty container.

DISPOSAL: Dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND CONDITIONS OF SALE: Seller makes no warranty, express or implied, concerning the use and handling of this product other than indicated on the label. Buyer assumes all risks of use and handling of this material when such use and handling are contrary to label instructions.

For information, call 1-800-248-7763



SANDOZ AGRO, INC. 1300 EAST TOUHY AVENUE, DES PLAINES, ILLINOIS 60018

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97-24-0060

VectoLex[®] FG

BIULUGICAL LARVICID

FINE GRANULE

ACTIVE INGREDIENT:

Bacillus sphaericus 2362, Serotype H5a5b, strain ABTS	
1743 fermentation solids, spores, and insecticidal toxins	7.5%
OTHER INGREDIENTS	<u>92.5%</u>
TOTAL	100.0%

Potency: This product contains 50 BsITU/mg or 0.023 Billion BsITU/lb. Expiration Date: (Two years from the date of manufacture).

The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

EPA Reg. No.73049-20 EPA Est. No. 33762-IA-001

List No. 05722

4.0

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- 4.0 Storage and Disposal
- 5.0 Directions for Use VectoLex FG 5.1 Application Directions
- 6.0 Notice to User

KEEP OUT OF REACH OF CHILDREN CAUTION

	FIRST AID		
	lf in eyes	 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 eye. Call a poison control center for treatment advice. 	
	lf on skin or clothing	 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. 	
If inhaled • Move person to fresh air. • If person is not breathing, call 911 of then give artificial respiration, premouth-to-mouth if possible. • Call a poison control center or do treatment advice.		 Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice. 	
	HOT LINE NUMBER		
Have the product container or label with you when calling a p control center or doctor, or going for treatment. You may also 1-877-315-9819 (24 hours) for emergency medical treat and/or transport emergency information. For all other inform call 1-800-323-9597.		duct container or label with you when calling a poison or doctor, or going for treatment. You may also contact 1819 (24 hours) for emergency medical treatment port emergency information. For all other information, 23-9597.	

2.0 PRECAUTIONARY STATEMENTS

2.1 HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if absorbed through the skin or inhaled. Avoid contact with skin, eyes or clothing. Wear protective eyewear. Avoid breathing dust. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Mixers/loaders and applicators not in enclosed cabs or aircraft, must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitizations.

2.2 Environmental Hazards

Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

3.0 DIRECTIONS FOR USE

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

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 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, or persons under contract to these entities only.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not contaminate water when disposing of equipment washwaters.

Pesticide Storage: Store in a cool, dry place.

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: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

5.0 DIRECTIONS FOR USE - VECTOLEX FG

5.1 Application Directions MOSQUITO CONTROL

VectoLex[®] FG Biological Larvicide Fine Granule (hereafter referred to as VectoLex FG) is a selective microbial insecticide for use against mosquito larvae in a variety of habitats. VectoLex FG can be applied to areas that contain fish, other aquatic life, and plants. VectoLex FG can be applied to areas used by or in contact with humans, pets, horses, livestock, birds, or wildlife. I. For control of mosquito larvae species* in the following non-crop sites:

Habitat	Rate Range	Habitats:
Wastewater: Sewage effluent, sewage lagoons, oxidation ponds, septic ditches, animal waste lagoons, impounded wastewater associated with fruit and vegetable processing.	5-20 lbs/acre**	Rice, past citrus grov
Stormwater/Drainage Systems: Storm sewers, catch basins, drainage ditches, retention ponds, detention ponds and seepage ponds.	5-20 lbs/acre**	A Mosquito many of th Culex spp Aedes vez Ochlerota
Marine/Coastal Areas: Salt marshes, mangroves, estuaries.	5-20 lbs/acre**	Ochlerota Ochlerota Psoropho
Water Bodies: Natural and manmade aquatic sites such as lakes, ponds, rivers, canals, streams and livestock watering ponds and troughs.	5-20 lbs/acre**	Psoropho Ochlerota Ochlerota Anopheles Coquilletti
Dormant Rice Fields: Impounded water in dormant rice fields. (For application only during the interval between harvest and preparation of the	5-20 lbs/acre**	**Use higher control is cover.
field for the next cropping cycle.) Waste Tires: Tires stockpiled in dumps, landfills, recycling plants, and other similar sites.	0.5-2 lbs/ 1000 sq. ft.	Avoiding s of the ap weather r The appli for consid

II. For the control of mosquito larvae species* in the following agricultural/crop sites where mosquito breeding occurs: Habitats: Rate Range

Rice, pastures/hay fields, orchards, citrus groves, irrigated crops.		5-20 lbs/acre**
Apply VectoLex conventional gro VectoLex FG as	FG uniformly by a ound equipment. R	erial or leapply 4 weeks.
* Mosquito species effectively co many of those known to carry/ <i>Culex spp.</i> <i>Aedes vexans</i>	ontrolled by VectoLex transmit West Nile vir	r FG, including rus:
Ochlerotatus melanimon	(Aedes melanimon)	1
Ochlerotatus stimulans	(Aedes stimulans)	
Ocnierotatus nigromaculis Psorophora columbiae Psorophora ferox	(Aedes nigromaculi	5)
Ochlerotatus triseriatus	(Aedes triseriatus)	
Ochlerotatus sollicitans	(Aedes sollicitans)	
Anopheles quadrimaculatus Coquillettidia perturbans		
**Use higher rates (10 to 20 lbs. control is necessary, or in habi	/acre) in areas where tats having deep wate	e extended residual er or dense surface

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator and the treatment coordinator are responsible for considering all these factors when making decisions.

6.0 NOTICE TO USER

To the extent consistent with applicable law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on this label. To the extent consistent with applicable law, user assumes all risks of use, storage or handling not in accordance with accompanying directions.



VectoLex[®] WDG

BIOLOGICAL LARVICIDE

WATER DISPERSIBLE GRANULE

ACTIVE INGREDIENT:

Bacillus sphaericus 2362, Serotype H5a5b, Strain	
ABTS 1743 dried concentrate	. 51.2% w/w
OTHER INGREDIENTS	48.8% w/w
TOTAL	100.0% w/w
Potency: This product contains 650 BsITU/mg or BsITU/lb.	0.299 Billion

The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

EPA Reg. No. 73049-57 EPA Est. No. 33762-IA-001

List No. 60201

INDEX:

- 1.0 First Aid
- **Precautionary Statements** 2.0
- 2.1 Hazard to Humans (and Domestic Animals) 2.2 Environmental Hazards
- 3.0 Directions for Use 3.1 Chemigation
- 4.0 Storage and Disposal
- **Application Directions** 5.0
- Ground and Aerial Application 6.0
- 7.0 Notice to User

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID			
If in eyes	 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 eye. Call a poison control center or doctor for treatment advice. 		
HOT LINE NUMBER			
Have the pro	oduct container or label with you when calling a poisor		

control center or doctor, or going for treatment. You may also contact 1-877-315-9819 for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-323-9597.

PRECAUTIONARY STATEMENTS 2.0

2.1 HAZARD TO HUMANS (AND DOMESTIC ANIMALS) CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling. Mixer/loaders and applicators not in enclosed cabs or aircraft must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

2.2 **ENVIRONMENTAL HAZARDS**

Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

3.0 DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply directly to treated finished drinking water reservoirs or drinking water receptacles.

3.1 Chemigation

Do not apply this product through any type of irrigation system.

4.0 STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Storage: Store in cool [59-86°F (15-30°C)], dry place.

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: Nonrefillable 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 water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after flow begins to drip. Repeat this procedure two more times. Once cleaned, offer container for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

5.0 **APPLICATION DIRECTIONS**

the interval between harvest and

preparation of the field for the

next cropping cycle)

Do not apply when wind speed favors drift beyond the area of treatment.

I. For control of mosquito larvae species* in the following non-crop sites.

<u>Habitats</u>	Rate Range
Wastewater:	0.5-1.5 lbs/acre
Sewage effluent, sewage lagoons, oxidation ponds, septic ditches, animal waste lagoons, impounded wastewater associated with fruit and vegetable processing	(8 oz-24 oz/acre)
Stormwater/Drainage Systems: Storm sewers, catch basins, drainage ditches, retention, detention and seepage ponds	0.5-1.5 lbs/acre (8 oz-24 oz/acre)
Marine/Coastal Areas: Salt marshes, mangroves, estuaries	0.5-1.5 lbs/acre (8 oz-24 oz/acre)
Water Bodies: Natural and manmade aquatic sites such as lakes, ponds, rivers, canals and streams	0.5-1.5 lbs/acre (8 oz-24 oz/acre)
Dormant Rice Fields: Impounded water in dormant rice fields (For application only during	0.5-1.5 lbs/acre (8 oz-24 oz/acre)

II. For control of mosquito larvae species* in agricultural/crop sites where mosquito breeding occurs.

<u>Habitats</u>	Rate Range
Rice, pastures/hay fields,	0.5-1.5 lbs/acre
orchards, citrus groves,	(8 oz-24 oz/acre)
irrigated crops	

Use higher rates (1 to 1.5 lbs/acre) in areas where extended residual control is necessary, or in habitats having deep water or dense surface cover.

Apply uniformly by aerial or conventional ground equipment. Reapply as needed after 1-4 weeks.

*Mosquito species effectively controlled by VectoLex WDG:

Culex spp.

Aedes vexans	
Ochlerotatus melanimon	(Aedes melanimon)
Ochlerotatus stimulans	(Aedes stimulans)
Ochlerotatus nigromaculis	(Aedes nigromaculis)
Psorophora columbiae	
Psorophora ferox	
Ochlerotatus triseriatus	(Aedes triseriatus)
Ochlerotatus sollicitans	(Aedes sollicitans)
Anopheles quadrimaculatus	S
Coquillettidia perturbans	

6.0 GROUND AND AERIAL APPLICATION

VectoLex WDG may be applied using conventional ground or aerial application equipment with quantities of water sufficient to provide uniform coverage of the target area. For application, first add the VectoLex WDG to water to produce a final spray mixture. The amount of water will depend on weather, spray equipment, and mosquito habitat characteristics. For application, fill the mix tank or plane hopper with the desired quantity of water. Start the mechanical or manual agitation to provide moderate circulation of water before adding the VectoLex WDG. Backpack and compressed air spravers may be agitated by shaking after adding VectoLex WDG to the water in the sprayer. VectoLex WDG suspends readily in water and will stay suspended over normal application periods. Brief recirculation may be necessary if the spray mixture has sat for several hours or longer. Do not mix more VectoLex WDG than can be used in a 48 hour period. AVOID CONTINUOUS AGITA-TION OF THE SPRAY MIXTURE DURING SPRAYING.

For ground spraying, apply 8-24 oz./acre (227-680 g/acre) of VectoLex WDG in 5-100 gallons of water per acre using hand-pump, airblast, mist blower, or other spray equipment. For aerial application, apply 8-24 oz./acre (227-680 g/acre) of VectoLex WDG through fixed wing or helicopter aircraft equipped with either conventional boom and nozzle systems or rotary atomizers at a convenient dilution rate. For aerial application, apply 0.5-10 gallons/acre of the final spray mixture to provide uniform coverage of the target area.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-andweather-related factors determine the potential spray drift. The applicator and treatment coordinator are responsible for considering all these factors.

Rinse and flush spray equipment thoroughly following each use.

Amount of VectoLex WDG needed to treat small areas:

	Rate of VectoLex WDG/Acre		
Area To Treat	<u>8 oz.</u>	<u>16 oz.</u>	<u>24 oz.</u>
1/4 Acre	2 oz	4 oz	6 oz
1/2 Acre	4 oz	8 oz	12 oz
10 Acres	5 lb	10 lb	15 lb
20 Acres	10 lb	20 lb	30 lb

7.0 NOTICE TO USER

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

VectoLex is a registered trademark of Valent BioSciences Corporation.



VectoLex[®] WSP

WATER SOLUBLE POUCH

ACTIVE INGREDIENT:

Bacillus sphaericus 2362, Serotype H5a5b, strain AB1	ſS
1743 Technical Powder (670 BsITU/mg)	7.5%
OTHER INGREDIENTS	92.5%
TOTAL	100.0%

Potency: This product contains 50 BsITU/mg or 0.023 Billion BsITU/lb.

Expiration Date: (Two years from the date of manufacture).

The percent active ingredient does not indicate product performance and potency measurements are not federally standardized.

List No. 05722

EPA Reg. No. 73049-20 EPA Est. No. 33762-IA-001 (Lot No. Suffix 'N8') EPA Est. No. 33967-NJ-1 (Lot No. Suffix 'Q5')

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- 2.0 Precautionary Statements 2.1 Hazards to Humans and Domestic Animals
- 2.2 Environmental Hazards
- 3.0 Directions for Use
- 4.0 Storage and Disposal
- 5.0 Directions for Use VectoLex Water Soluble Pouches (WSP)
- 5.1 Application Directions
- 6.0 Notice to User

KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID		
If in eyes	 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 eye. Call a poison control center for treatment advice. 	
lf on skin or clothing	 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. 	
HOT LINE NUMBER		

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-315-9819 (24 hours) for emergency medical treatment and/or transport emergency information. For all other information, call 1-800-323-9597.

2.0 PRECAUTIONARY STATEMENTS

2.1 HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

2.2 ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of equipment washwaters or rinsate. Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

3.0 DIRECTIONS FOR USE

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

4.0 STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Do not contaminate water when disposing of equipment washwaters.

Pesticide Storage: Store in a cool, dry place.

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: Non refillable container. Do not reuse or refill this container. Offer for recycling if available. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. For Water Soluble Pouches, dispose of empty outer foil bag in trash.

5.0 DIRECTIONS FOR USE - VECTOLEX WATER SOLUBLE POUCHES (WSP)

Once the foil bag containing Water Soluble Pouches is opened, use pouches within one day.

5.1 APPLICATION DIRECTIONS

MOSQUITO CONTROL

VectoLex WSP is a selective microbial insecticide for use against mosquito larvae in a variety of habitats. VectoLex WSP can be applied to areas that contain fish, other aquatic life, and plants. VectoLex WSP can be applied to areas used by or in contact with humans, pets, horses, livestock, birds or wildlife.

I. For control of mosquito larvae species* in the following non-crop sites:

Habitat	Rate Range	
Drainage/Drainage Systems: Storm drains, catch basins, retention, detention and seepage ponds.		1 pouch/50 sq.ft. ⁽¹⁾
Treatment Areas (Fo	or Use In) ⁽¹⁾ :	
Ponds Lagoons Water gardens Hollow trees and tree holes Urns Rain barrels Livestock watering troughs/ponds/tanks Irrigation ditches Roadside ditches Flood water	Standing water Storm water retention areas Catch basins Birdbaths Fountains Flowerpots and planters Snowmelt pools Abandoned swimming pools	Unused swimming pools or spas Flooded basements Pool covers Gutters and drains Wheelbarrows Garbage cans and covers Discarded tires

Any location where water accumulates and remains standing for periods of time, except treated, finished drinking water for human consumption.

(1)Treat on basis of surface area of potential mosquito breeding sites by placing one (1) VectoLex Soluble Pouch for up to 50 square feet of treatment area. Re-apply as needed after 1 to 4 weeks.

5.1 **APPLICATION DIRECTIONS (cont'd)**

Longer periods of mosquito population suppression may result where sufficient numbers of non-target aquatic invertebrate parasites and predators are present since these are not affected by the product and contribute to mosquito population reduction.

* Mosquito species effectively controlled by VectoLex WSP, including many of those known to carry/transmit West Nile Virus:

Culex spp. Aedes vexans Ochlerotatus melanimon (Aedes melanimon) Ochlerotatus stimulans (Aedes stimulans) Ochlerotatus nigromaculis (Aedes nigromaculis) Psorophora columbiae Psorophora ferox Ochlerotatus triseriatus (Aedes triseriatus) Ochlerotatus sollicitans (Aedes sollicitans) Anopheles quadrimaculatus Coquillettidia perturbans

6.0 NOTICE TO USER

To the fullest extent permitted by law, seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.





NATULARTM XRT Mosquito Larvicide / Extended Release Tablet

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	<u>93.75%</u>
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.

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)

<u>giaecco).</u>		
	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.		

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.

General 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.

General 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 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 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 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 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.

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).

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 Trademark of Clarke Mosquito Control Products, Inc.

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

EPA Reg. No.: 8329-84

EPA Est. No.: _____

Net Weight: _____

Lot No.:_____

Pre Strike

KILLS MOSQUITOES BEFORE THEY HATCH INCLUDING THOSE WHICH MAY TRANSMIT WEST NILE VIRUS MOSQUITO LARVICIDE 21 DAY PROTECTION CONCENTRATED FORMULA TREATS OVER 8,700 SQ. FT.



ACTIVE INGREDIENTS:

(S)-Methoprene (CAS #65733-16-6)	1.5%
OTHER INGREDIENTS:	98.5%
Total	100.0%

EPA Reg No. 2724-451

KEEP OUT OF REACH OF CHILDREN CAUTION

See additional precautionary statements

Mosquitoes are not only a nuisance; they are becoming a serious health threat to people and pets. With just one bite, mosquitoes can transmit West Nile Virus and other viruses that cause encephalitis. They can also transmit heartworm disease to dogs and cats.

Pre-Strike™ kills developing mosquitoes before they become breeding, biting adults. It is easy to use; simply sprinkle the granules in areas where mosquitoes may breed (nothing to mix or spray). **Pre-Strike** granules offer long-lasting mosquito control for up to 21 days. When used as directed, **Pre-Strike will not adversely affect humans, animals, fish or vegetation.**

Treatment Areas:

- Bird Baths Urns
- Tree HolesWater Gardens
- Old Tires
 Rain Barrels
 Flower Pots
 Roof Gutters
- Pool Covers
- Ornamental Fountains
- •Abandoned Swimming Pools
- Other Water Holding Receptacles

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS - CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes or skin. Due to the size and abrasiveness of the granule, use protective eyewear and clothing to minimize exposure during application. Wash thoroughly with soap and water after handling.

FIRST AID

If in eyes

• 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 eye.

If on skin or clothing

- 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. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-950-4783 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

Do not apply to waters that drain into public waterways.

DIRECTIONS FOR USE

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

GENERAL DIRECTIONS

Pre-Strike contains S-methoprene insect growth regulator which controls mosquitoes before they can become adults for up to 21 days after application.

Measure and then sprinkle the appropriate amount of **Pre-Strike** evenly over the surface of the water to be treated in order to control mosquitoes before they become breeding, biting adults. Measure the surface area of the water and follow the table below for the appropriate amount of product to use. Emptying or discarding small containers that are holding water will ensure the best treatment. In instances where small containers cannot be discarded and for locations such as flower pots, old tires, urns, etc. use 20 granules for every gallon of water.

Begin treating when adult mosquitoes are first noted in the spring and continue applications throughout the mosquito season, which is typically up to the first frost. After treatment, you may notice that there will still be live larvae in the water. Treated larvae will continue to develop normally to the pupal stage where they die.

NOTE: S-Methoprene insect growth regulator has no effect on mosquitoes which have already reached the pupal or adult stage prior to treatment.

APPLICATION RATES

Amount of Product	Treatment Area (surface area - less than 2 ft deep of water)
1/4 tsp.	53 sq. ft.
¹ /2 tsp.	105 sq. ft.
1 tsp.	211 sq. ft.
1/2 tbls.	288 sq. ft.
1 tbls.	576 sq. ft.
1/4 cup	1,788 sq. ft.
1 cup	7,154 sq.ft.

Do not use food utensils such as tablespoons or measuring cups for food purposes after use with insecticides.

APPLICATION SITES

Pre-Strike may be applied as directed above to temporary and permanent sites listed on the label which support mosquito larval development. Examples of such sites include: tree holes, waterholding receptacles (e.g., old tires, urns, flower pots, cans, and other containers), water gardens, and other manmade water-holding depressions.

STORAGE AND DISPOSAL

Storage: Store closed containers of Pre-Strike in a cool dry place. **Disposal: If Empty:** Do not reuse this container. Place in trash or offer for recycling if available. **If Partially Filled:** Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

WARRANTY AND CONDITIONS OF SALE

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and handling of this material when such use and handling are contrary to label instructions.

For information or in case of emergency, call 1-800-765-4513 or visit our Web site: www.wellmarkinternational.com



Wellmark International Schaumburg, Illinois U.S.A.

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23-14-013