

NORTH SHORE MOSQUITO ABATEMENT DISTRICT

117 Northfield Road

Northfield, IL 60093

847-446-9434

www.nsmad.com

NPDES Permit ILG87

PESTICIDE DISCHARGE MANAGEMENT PLAN (PDMP)

PDMP Team

Contact/Title	Phone	Email	Responsibilities
Robert Berry Superintendent	847-446-9434 xt. 109	rberry@nsmad.com	PDMP
David Zazra Communications Manager	847-446-9434 xt. 105	dzazra@nsmad.com	PDMP Adverse Incident Reporting
Marlon Henry Operations Manager	847-446-9434 xt. 102	mhenry@nsmad.com	Corrective Actions Pest Management
Chris Xamplas Ecologist	847-446-9434 xt. 104	cxamplas@nsmad.com	Corrective Actions Pest Management
Mike Okon Computer Information Systems	847-446-9434 xt. 103	mokon@nsmad.com	Maps

Problem Identification

The NSMAD controls public health risk and nuisance mosquitoes found within our District, through a fully Integrated Pest Management Program. The utilization of adult mosquito monitoring devices and visual larval surveillance are used to determine the best course of action for each particular situation. Our larval and adult mosquito control consists of the two following habitats.

A. Urban

- Catch basins and Storm drains
- Residential containers
- Unmaintained pools and ponds
- Retention ponds
- Dense vegetation
- Drainage ditches
- Construction sites
- Open Fields

B. Forested

- Flooded woodlots
- Roadside ditches
- Bicycle Paths

Action Threshold(s)

Pest Problem Description:

Mosquitoes are the pests of concern and can be categorized in two main groups, nuisance mosquitoes and public health risk mosquitoes. Of the 30+ species of mosquito found in the North Shore Mosquito Abatement District, those of main concern include the *Ae. vexans*, *Ae. triseriatus*, *Ae. trivitattus*, *Cx. pipiens*, *Cx. restuans* and *Oc. japonicus*. These mosquitoes are most commonly found in traps throughout the district and are the main cause of public health risk and nuisance to residents of the district.

Action threshold summary

In order to decrease the probability of mosquito and vector borne diseases and minimize the annoyance of nuisance biting mosquitoes, the NSMAD works to reduce and manage the mosquito population within the district through various forms of control including source reduction, larval control and adult mosquito control.

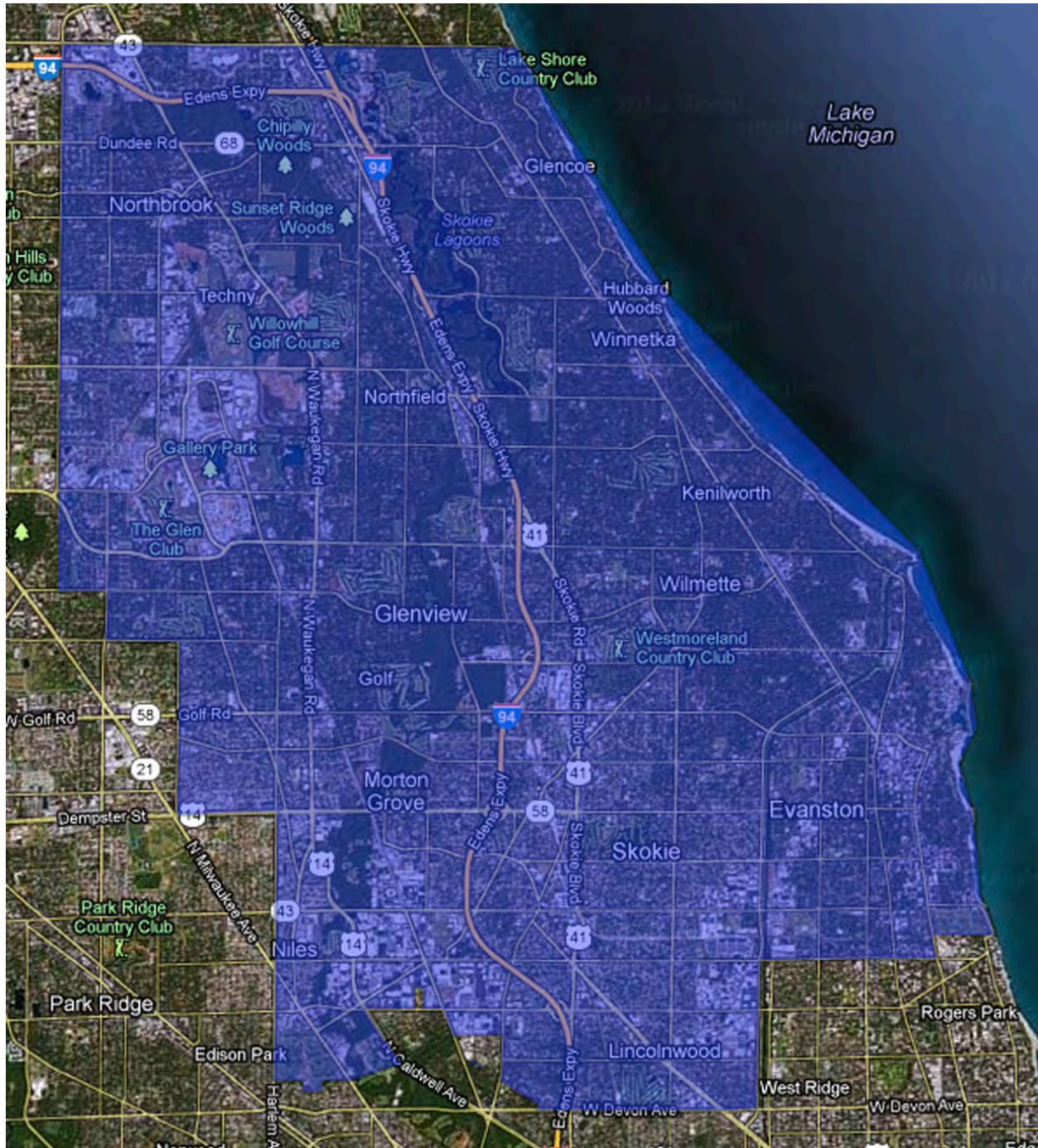
Action thresholds for larval control are based on institutional knowledge and experience, weather conditions, larval surveillance and surveying known mosquito habitats. If counts of 1-5 larvae are seen on average in a dip sample, a larvicide application is warranted. Some of the other factors taken into consideration include temperature, short and long term weather conditions and whether the breeding source can be immediately removed or reduced. Seasonal temperature and precipitation changes warrant the beginning of larval control in catch basins and off road sites.

Action thresholds for adult mosquito control are based on quantifying the mosquito population in the area and determining the potential health risk to the public. Monitoring adult mosquito population density is accomplished by examining specimens brought in from traps placed throughout the district. Gravid traps operate 24/7 and are collected at least three times per week. All mosquitoes collected are sorted and counted. These counts indicate the population density of public health risk mosquitoes in the area. The *Culex* mosquitoes found in the gravid traps are tested via RAMP at the NSMAD lab for mosquito borne diseases and sent out for additional testing via RT-PCR. New Jersey light traps are also located throughout the district. The traps are collected weekly and mosquitoes are sorted by species and counted. Nuisance mosquitoes are typically captured in the light traps and the counts from these traps

help give an indication of the population density of mosquitoes such as the *Ae. vexans*. In addition to trap counts, laboratory testing and surveillance, institutional knowledge and experience, resident complaints are also taken in to consideration as an action threshold for adult mosquito control.

General Location Map

Waterways located within the treatment area are: North Branch of Chicago River, Skokie River, Skokie Lagoons



Water Quality Standards

Waters (North Branch of Chicago River, Skokie Lagoons and Skokie River) are not impaired by any substance which is either an active ingredient in the pesticide to be discharged or a degradate of such an active ingredient.

Pest Management Options Evaluation

Prior to first pesticide application in each area (Townships) evaluate considering impacts to water quality, non-target organisms, feasibility, and cost effectiveness.

Options (one or combo):

1. No action
2. Prevention
3. Mechanical or physical methods
4. Cultural methods
5. Biological control agents
6. Pesticides

Pest Management Options (PMO)	Surveillance / Threshold	Application Method
No Action (Larval)	<ul style="list-style-type: none"> • Dip sample shows no signs of larvae present • Larvae predators present in habitat • Inclement weather in the forecast 	N/A
No Action (Adult)	<ul style="list-style-type: none"> • Inclement weather in the forecast • Environmental conditions • Mosquito population below threshold 	N/A
Pesticide Application (Larval)	<ul style="list-style-type: none"> • Weather or environmental conditions • Rainfall producing standing water in forested areas • Larval surveillance conducted by dip samples of standing water and containers holding water containing 1-5 larvae per dip on average • Seasonal temperature and precipitation changes warrant the beginning of larval control in catch basins and off road sites • Inspecting catch basins and other sources of stagnant water for breeding and larval activity • Institutional knowledge and experience • Inspecting known mosquito breeding habitats 	Hand or truck application of either granular or ingot product using the minimum application rate as required per the product label.
Biological Application (Larval)	<ul style="list-style-type: none"> • Impounded waters only • Environmental conditions • Larval surveillance conducted by dip samples of water containing 1-5 larvae per dip on average • Institutional knowledge and experience • Property checks for evidence of mosquito breeding and larvae in pools, ponds, fountains and any other container with the ability to hold water 	Introducing mosquito larvae eating fish species to impounded waters.

Source Reduction - Urban	<ul style="list-style-type: none"> • Property checks for mosquito breeding and larvae in pools, ponds, fountains and any other container with the ability to hold water • Larval dip counts looking for presence of container breeders 	Removing and or emptying containers that hold water.
Source Reduction - Forested	<ul style="list-style-type: none"> • Weather conditions • Environmental conditions • Rainfall producing standing water in forested areas • Institutional knowledge and experience • Inspecting known mosquito breeding habitats 	Flood prevention, removing and or emptying containers that hold water, ditch clearing, debris removal, increasing flow of water.
Pesticide Application ULV (Adult Control)	<ul style="list-style-type: none"> • WNV positive mosquito pool found via RAMP test • WNV, SLE, EEE or other vector/mosquito borne disease positive mosquito pool reported via RT-PCR • WNV, SLE, EEE, or other vector /mosquito borne virus positive human, bird or other animal reported within the district or its border • High count or significant increase of public health risk mosquitoes in trap collection (daily average greater than 25 mosquitoes per trap) • Resident complaints of mosquitoes. • High count or significant increase of nuisance mosquitoes in trap collection (daily average greater than 25 mosquitoes per trap) • Combination of precipitation and temperature per institutional knowledge and experience 	Ground ULV application via hand or truck mounted equipment applied in accordance with the recommended rate per product label.
Pesticide Application Barrier (Adult Control)	<ul style="list-style-type: none"> • Resident complaints of mosquitoes • Public gatherings and events • Any combination of light trap counts, gravid counts, WNV or other positive pools of mosquitoes, dip samples or environmental and weather conditions • Areas inaccessible to truck ULV 	Backpack sprayer applied to vegetation in accordance with the recommended rate per product label.
Public Relations and Education	<ul style="list-style-type: none"> • Continual 	<ul style="list-style-type: none"> • Media Relations • Public Information Booth/Events • Website • Intergovernmental Agency Relations • Community Outreach

Response Procedures

Spill Response procedures

The following are the procedures for spill response management.

1. Ensure appropriate personal protection is taken
2. Utilize supplied spill kit
3. Stop spill from spreading
4. Stop spill at the source
5. Inform Operations Manager as to nature of incident
6. Operations Manager will document all info regarding incident
7. Conclusions as to whether spill is of the size where further notification is required will be determined

Adverse Incident Response Procedures

An adverse incident is defined by the ILEPA as an unusual or unexpected incident in which an applicator has observed, discovered upon inspection or otherwise become aware in which:

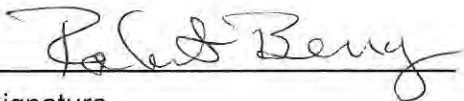
1. There is evidence that a person or non-target organism has likely been exposed to a pesticide residue, and
2. The person or non-target organism suffered a toxic or adverse effect.

If an incident is determined to be adverse in nature, the NSMAD will, within 24 hours of the adverse incident, inform the IEMA and USEPA Region 5 Pesticide Program. An ILEPA Adverse Incident Report will be filled out by NSMAD, and submitted as per NPDES Permit ILG87 guidelines.

SIGNATURE REQUIREMENTS

Permittee must sign, date and certify the PDMP in accordance with Appendix B

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A handwritten signature in cursive script, appearing to read "Robert Berry", written over a horizontal line.

Signature

The name "ROBERT BERRY" printed in all capital letters, written over a horizontal line.

Print Name