Integrated Vector Management Guidelines for Mosquitoes
Introduction

The Placer Mosquito and Vector Control District follows a specific series of steps for deciding when and how to control larval or adult mosquitoes or perform NPDES water quality monitoring. These steps take into account factors such as mosquito species, abundance, location, overall public health risk, and environmental conditions. The following three flowcharts outline the steps involved for 1) NPDES water quality visual monitoring 2) larval mosquito inspection and treatment, and 3) adult mosquito control.

The adult and larval treatment flowcharts are guidelines, and are not meant to replace the judgment of an experienced vector control technician. For example, a source may contain larvae below the treatment threshold, but pre-treatment may be warranted by the individual circumstances.

The District is committed to using science-based IPM (integrated pest management) practices to ensure that resources and materials are applied in the most effective, efficient, and environmentally sound manner. These decision-making guidelines for water quality monitoring and larval and adult treatment are an essential part of our IPM program.
Placer Mosquito and Vector Control District
Integrated Vector Management Immature Mosquito Stages Management Guidelines

Potential Larval Habitat? (water)

YES

Environmentally sensitive habitat (e.g. vernal pool)?

YES

Consider Mosquito Reduction Best Management Practices

NO

Will source hold water long enough for mosquitoes to develop (greater than 72-96 hours)?

YES

Consider prevention measures, schedule return inspection

NO

Is source reduction possible and appropriate? (drain or remove source)

YES

Consider Mosquito Reduction Best Management Practices

NO

Are biologicals possible and appropriate? (fish, etc)

YES

Permanent/semi-permanent source
Does not drain to waters of the US
Fish likely to survive
Minimal risk to ornamental fish

YES

Implement biologicals, proceed with flowchart

NO

None found

Set return inspection date

Only eggs found

Set return inspection date

1st instars-pupae found, less than 0.05 per dip

Set return inspection date

1st instars-pupae found, more than 0.05 per dip

Apply appropriate public health larvicide

Sample (dip) for larvae, eggs, and pupae.

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Integrated Vector Management Adult Mosquito Management Guidelines

Vector borne disease active?

NO

YES

Positive:
- Human case
- Horse case
- Sentinel chicken
- Dead bird
- Wild Bird

Positive mosquito pool

Implement Enhanced Surveillance in local area

Positive mosquito pool?

NO

YES

Consider vector species abundance

Consider adult mosquito control

Location?

NO

YES

Rural*

Suburban*

Culex: 200 in CO₂ trap

Anopheles: 100 in CO₂ trap

Aedes: 100 in CO₂ trap

Consider adult mosquito control

Culex: 25 in CO₂ trap

Anopheles: 10 in CO₂ trap

Aedes: 25 in CO₂ trap

5 in sweep net

Consider adult mosquito control

* For mosquito abundances lower than those indicated here, continue weekly monitoring.