

Naval Base Ventura County
Mosquito Control and Protection Tips

The Point Mugu salt marsh wetlands are the largest in southern California and support a variety of wildlife. Though a nuisance to humans (and a potential health threat), mosquitoes are a part of this natural ecosystem. Naval Base Ventura County (NBVC) is dedicated to minimizing the fresh water mosquitoes that carry disease and reduce the salt water nuisance mosquitoes. There are 2 main types of mosquitoes: (1) *Aedes taeniorhynchus*, appear in early season (May-Oct), prefer salt marshes. They bite during the day and are less likely to carry diseases so are considered a nuisance mosquito; and (2) *Culex* spp. appearing later (Jul-Oct), prefer fresh water, bite at dusk/dawn and night, and could carry diseases which makes them a vector mosquito. The Zika virus carrying invasive *Aedes* mosquitoes are not known to exist in Ventura County, nor is the virus itself in the human population to date.

Mosquito Control Tips: Don't let your yard become a mosquito breeding ground!

- Empty, drill drainage holes, stand at a slant, invert, etc. anything that holds standing water - old tires, buckets, plastic covers, toys, wheelbarrows, tools, etc.
- Birdbath, fountain, kids pool and pet trough water should be changed weekly and the interior scrubbed to remove eggs.
- Recycle unused containers - bottles, cans and buckets stored outdoors may collect water.
- Make sure roof gutters are draining properly, clean clogged gutters in the spring and fall.
- Fix leaky outside faucets and sprinkler systems. Make sure your sprinklers don't over run and create puddles. If so, please contact the Lincoln Military Housing (LMH) maintenance line at 888-578-4141.
- Make sure windows and door screens are bug-tight.
- If you see any suspicious puddles around the base (especially a puddle that always seems to be in the same place even when it hasn't rained), please report it to the Public Works Department (PWD) trouble desk at 805-989-8888.
- Keep lawns short and shrubbery trimmed so that light can penetrate. Mosquitoes like dense/dark foliage to hide in.
- Place a trouble call to PWD or contact housing to report large swarms of mosquitoes. Be specific in the location of the swarm and the approximate numbers (more than 100 is a swarm, please don't call if it's just a few).



Protect Your Skin:

- Stay indoors at dawn and dusk, if possible, when vector mosquitoes are most active.
- Wear loose fitting, long-sleeved shirt, blouse, or long pants, and a hat when going into mosquito areas.
- Moving air is the best, non-toxic way to keep adult mosquitoes away. Use fans outside when sitting at a picnic table or place fans in doorways blowing out to keep mosquitoes from flying in.
- Repellents with DEET are very effective, and are widely used to reduce the risk of bites. Take special care when applying repellents on your children! Carefully follow instructions on the label. Other more natural repellents that contain eucalyptus and lemon oils have been noted by Consumer Reports as being effective. Find what works for you.

NBVC Mosquito Program Outline:

NBVC follows guidelines set forth in the Integrated Pest Management Plan (IPMP) on when and how to control various pests. Integrated Pest Management is a method of setting priorities and goals for controlling pests while minimizing harm to people and the environment. This includes a threshold level of tolerance for some pests. NBVC mosquito control program generally runs from May to October and complies with all local, State, and Federal environmental agencies' mandates for mosquito control and pesticide use. NBVC uses historical data, habitat factors, tide height levels, and other available information, to carry out extensive surveillance and responds with appropriate treatment in order to keep the mosquito population under control.

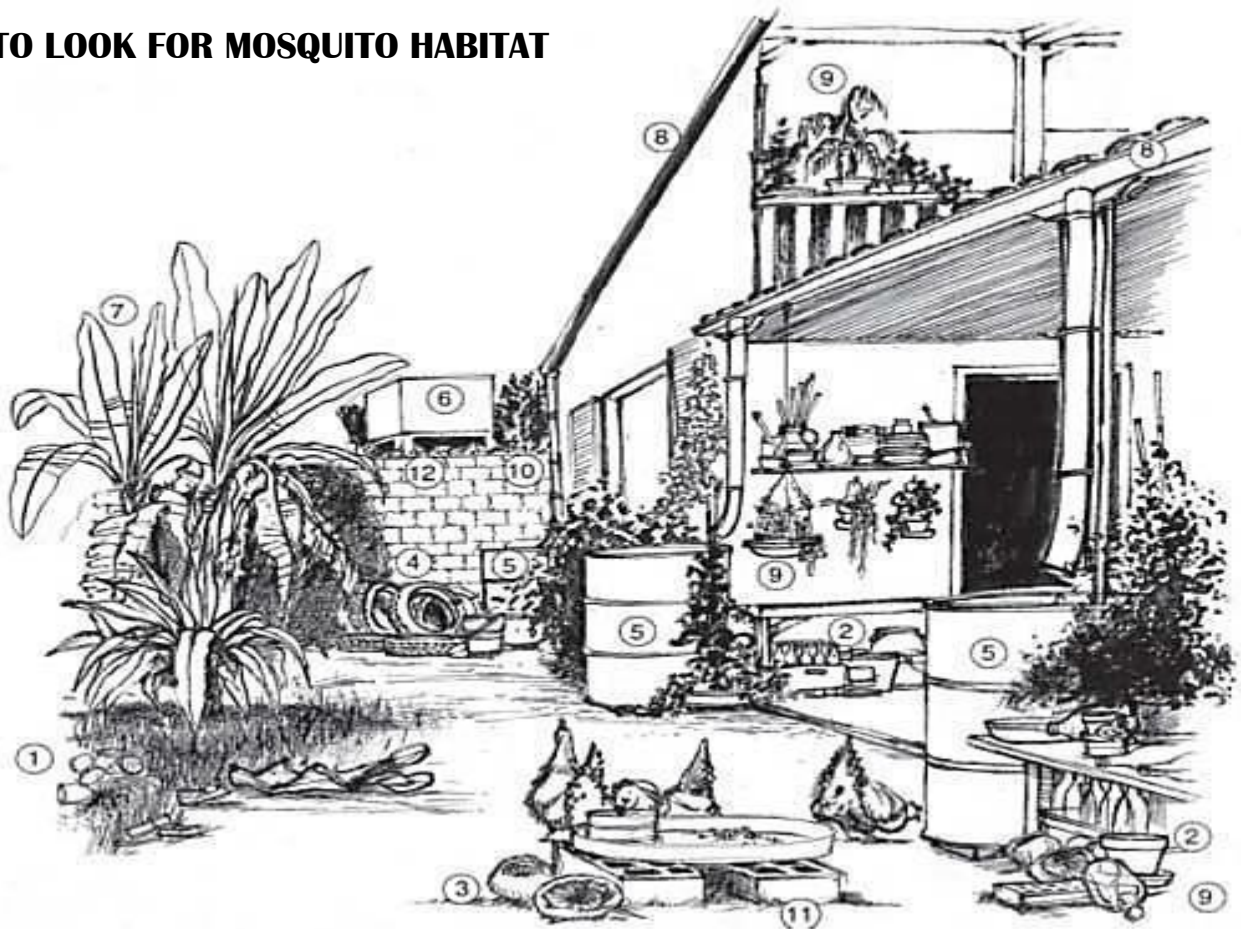


The main focus of the program is to prevent mosquito larvae from turning into flying adults. This is accomplished by applying larvicides in the water to kill the larvae and/or a growth inhibitor to prevent larvae from turning into adults. The larvicide is a naturally occurring bacterium known as *Bacillus thuringiensis* var. *israelensis* (Bti). This is the least toxic and most effective treatment.

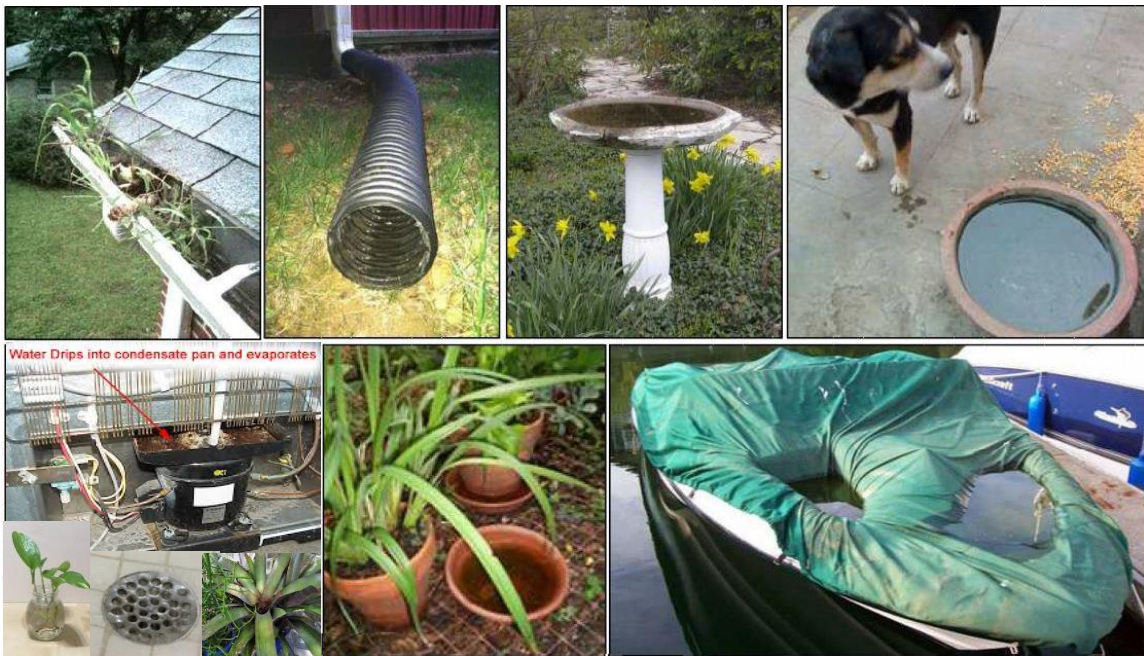
The least effective method for controlling mosquitoes is to attempt to knock down flying adults. To do this, an ultra-low volume truck mounted fog sprayer is used. Only mosquitoes that fly through the fog will be killed. So will any other insect. The fog droplets are relatively heavy to prevent drift and fall to the ground within hours. At this point it is no longer effective. There are restrictions in the use of fogging to ensure that no fog chemical drifts into water bodies, and since nearly half of the base contains jurisdictional wetlands, drift is a major issue. For these reasons, this protocol is no longer used by most vector control agencies around the country as a standard control method.

NBVC works diligently to reduce, not eliminate, the mosquito population. There will always be mosquitoes in this marsh habitat. Most importantly we work to keep the fresh water mosquitoes that spread disease to a minimum. Personnel and residents are key to reducing fresh water mosquitoes. We appreciate all of your help, assistance, and tolerance.

WHERE TO LOOK FOR MOSQUITO HABITAT



Examples of outdoor breeding sites of *Aedes* spp. (1) discarded cans/plastic containers, (2) bottles, (3) coconut husks, (4) tires, (5) barrels, (6) water storage tanks, (7) bromeliads and axils of banana trees, (8) obstructed roof gutters, (9) plant pot saucers, (10) broken bottles fixed on walls to deter burglars, (11) holes in unused construction blocks, and (12) the upper edge of block walls.



More examples of locations that breed mosquitoes (Clockwise from top left): Clogged roof gutters, corrugated drain pipes, water in birdbaths and outdoor pet dishes, tarps and equipment covers, potted plants and saucers, indoor drains, plants, pans under fridge/AC .