

## Directorate of Public Works-Environmental

News Release  
August 2007



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### **Fort Hood stepping up fight against the bite as mosquito season nears** by Christine Luciano

You swat, slap, duck, and run, but it doesn't matter. On summer evenings or early mornings, mosquitoes track you down and leave you with itchy red welts. With the unusual rainy season this summer, it has been a horrendous mosquito season. The Directorate of Public Works and Carl R. Darnall Army Medical Center Preventive Medicine are working together to reduce the mosquito population and help you to avoid these little biting pests.



The DPW Natural Resources Branch and Preventive Medicine entomology personnel combine efforts in identifying particular mosquito breeding sites on Fort Hood by either complaint or observation. “Areas with standing water are prime breeding sites for mosquitoes,” said Anne Hamilton, Natural Resources Entomologist. “Examples include any standing water in ditches, around and under the buildings, in stopped up drains, man made containers, and anything else that can hold water.” Hamilton explained that mosquitoes need standing water to hatch their eggs. “They can hatch in any area of water that stands up to seven days, and the result is one mosquito may lay anywhere around 100 eggs.”

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The Entomology personnel conduct routine mosquito breeding site surveillance and initiate controls if necessary. The Preventive Medicine personnel also conduct weekly adult mosquito surveillance at various locations throughout the Installation and refer them to the Texas Department of Health for West Nile Virus and other testing. The control methods used are environmentally safe and do not affect beneficial insects and other animals. Some of the methods used to control the mosquito population include getting rid of standing water if possible, applying larvacides, and adding small fish called Gambusia.

DPW Maintenance personnel have been very busy this summer and efforts are still on-going in removing debris in drainage ditches and unstopping storm drains clogged from recent flooding. But when breeding sites are detected in areas of standing water that cannot be removed, the entomology team applies a larvicide to the water. A larvicide is a pest control product used to control mosquitoes by killing or preventing the mosquito larvae from maturing into adults. The Larvicide products used are environmentally safe and do not harm fish and beneficial aquatic insects.

Another method of control that is occasionally used on the installation is to place small mosquito fish called Gambusia into standing water sites. *Gambusia affinis* is a small 4 cm-7 cm fish that is

native to this area and has a ferocious appetite for mosquito larvae and pupae. “Gambusia are added to more permanent standing areas of water such as creeks and ponds that are new or had previously dried and lost their aquatic organisms.” Hamilton said. “The use of Gambusia is a popular method for biological control and is used for preventing the production of heavy mosquito populations.”

Nature also has some controls in place. Beneficial insects like dragon flies and damsel flies prey on mosquitoes in the larvae and adult stages. Small fish and tadpoles feed on mosquito larvae. Birds, bats, and wasp feed on the adult mosquitoes. “Fort Hood encourages using or allowing natural control of mosquitoes to work, because it is effective,” Hamilton said. “If you spray or fog you kill your beneficials like dragon flies, which prey on mosquitoes.” She explained that the disadvantage of a heavy chemical spray program is that it would eliminate the natural defense, and thus areas would have to be sprayed on a regular basis.



During mosquito season, in the spring through summer months, residents and Soldiers are encouraged to take steps to protect themselves with these simple tips:

- Wear long pants and long-sleeved shirts during dawn and dusk.
- Use repellent products containing DEET. \*Note\* Adult products are 30% DEET and children should not use anything beyond 10% DEET.
- Empty anything with standing water to include kiddie pools, garden containers, pots, and buckets.
- Check drains and under buildings for standing water.

Right now there is a general increase of the mosquito population. “If you go outside and you do not have any repellent you are going to experience mosquitoes,” Hamilton said. “But if you suddenly notice in your backyard that you have five times the problem compared to wherever you else you go, there is probably a nearby breeding site.” If you have any issues in housing or the cantonment area, contact Natural Resources at 288-5030 (287-2885 alternate) or Preventive Medicine at 287-4328 (288-9112 alternate) for information and assistance.