

Managing Mosquitoes in Floodplains and Ponds



Pima County Regional Flood Control District (District) is working to reduce mosquito breeding in floodplains, ponds, and drainageways that are maintained by the District.

District-managed areas known to hold water for over three days are routinely inspected and treated with *Bacillus thuringiensis israelensis* (Bti).

Bti is a naturally-occurring soil bacterium used as a pesticide specific to mosquito larvae.

Benefits of Wetlands

The District maintains numerous constructed ecosystem restoration ponds and detention basins. These wetland areas provide important wildlife habitat, including breeding sites for six species of toads and frogs native to the Tucson area.

We diligently maintain open-water wetlands to eliminate mosquitoes.

The District and our partners routinely check for larvae, apply Bti and reduce shoreline vegetation that could harbor mosquito breeding.



Wetlands provide valuable habitat for a variety of native species, including the Great Plains Toad.



There are 150 different species of mosquitoes occurring in the United States and over 40 species in Arizona.

Nature's Mosquito Control

Long-lived natural ponds are typically not a significant source of mosquito breeding due to the presence of beneficial water bugs that eat mosquito larvae.

A pond that occasionally stays wet for over three weeks can sustain diverse populations of beneficial aquatic predators plus other wildlife.

Don't add bleach or other chemicals to ponded water, as this creates conditions that can favor mosquito breeding.



Mosquito larvae face many threats including Predacious Diving Beetles.

Dragonfly larvae eat mosquito larvae.



Pima County staff regularly removes nuisance ponding and vegetation where mosquitoes can breed.



Crews broadcast Bti granules at Kino. All-natural Bti disrupts the breeding cycle of mosquitoes.

Mosquito Larvae

Mosquito larvae ("wigglers") are approximately 1/4 inch long and resemble small worms. They rest just under the surface of the water, and when disturbed, they fold and wiggle to move through the water. The pupae are comma shaped and soon change into adult mosquitoes.

Mosquito larvae and pupae can be eradicated with Bti, available at most hardware stores.

You can check for larvae and pupae yourself using a white cup. Dip the cup into the water and look for the 1/4 -3/8 inch-long wriggling larvae. Similar larvae that don't wriggle may be dragonfly larvae or other beneficial insect predators.



In just three days stagnant water becomes prime habitat for mosquitoes.



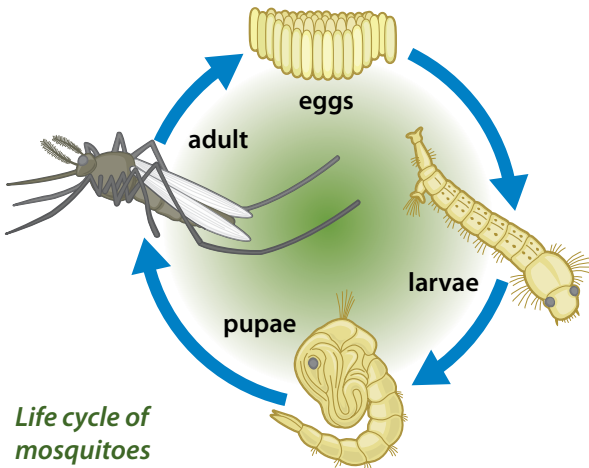
A healthy aquatic environment has many natural predators, such as bats, to control mosquitoes.

Urban Mosquitoes

The types of mosquitoes known to transmit human disease are adapted to urban and suburban areas, breeding in backyard containers and clutter where water collects. Plant saucers, tires, pool covers, rain gutters, etc. provide breeding conditions. Even a teaspoon of water can sustain mosquito breeding.

Check for and eliminate standing water around your home. Seal tanks and water barrels, maintain evaporative coolers and remove clutter. Scrub bird baths and pet water bowls every few days.

Adult mosquitoes congregate near humid areas. To protect yourself from bites when you are outdoors, especially when near water or moist irrigated landscaping, wear long pants and long sleeves and apply insect repellent to exposed skin.



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To learn more about local mosquito issues you can visit: www.pima.gov/mosquito



To File a Complaint or Report a Concern

For drainage complaints in unincorporated Pima County call (520) 724-4600 or visit www.pima.gov/floodcontrol

For mosquito concerns or complaints call (520) 724-7908 or visit www.pima.gov/health

Pima County Flood Control District

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Taking Action Against Mosquitoes

