



# Mosquito Management

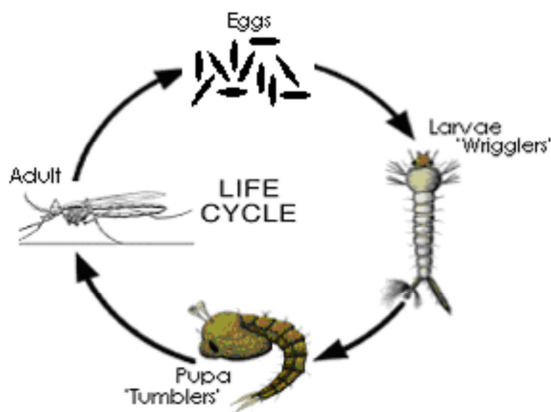
Mosquitoes are native insects which breed in salt, brackish or fresh waters and have been identified as being a major and significant threat to both human health and lifestyle throughout the world for many years. This has become prominent in Australia as a result of the climate, and the 'great outdoors' that many Australians love.

More than 220 mosquito species can be found in Queensland and a substantial number of these have been implicated as vectors of some human diseases. Some of these diseases include Ross River Virus, Barmah Forest Virus, Dengue Fever and Malaria. Fortunately, none of these diseases are endemic to this area, however they can be easily introduced by infected visitors from countries and other parts of Australia where the diseases occur.

Ross River and Barmah Forest viruses are the two most common diseases transmitted to humans by mosquitoes in the Fraser Coast. Some mosquitoes can pass heartworms from one dog to another dog.

Mosquitoes require water in which to breed. Females lay eggs on the surface of the water or the water's edge. The eggs then hatch into Larvae (wigglers), which live under the surface of still water and breathe air through the surface. The Larvae go through four (4) stages before becoming Pupae (tumblers), which again live under water, emerging from the water soon after as an adult.

Mosquito life cycle



The life cycle can be completed in 7-10 days. Breeding occurs mainly during the months from September to April.

Mosquitoes breed in fresh and salt water areas around the home and in natural low lying areas and water courses.

## Types of mosquitoes

South East Queensland is home to three types of mosquitoes:

### 1. Saltmarsh mosquito - *Aedes vigilax*

Saltmarsh mosquitoes hatch in the inter-tidal and mangrove areas of the Fraser Coast Region including River Heads and Great Sandy Strait.



*Salt Marsh Treatment Areas*

### 2. Freshwater mosquito - *Culex annulirostris*

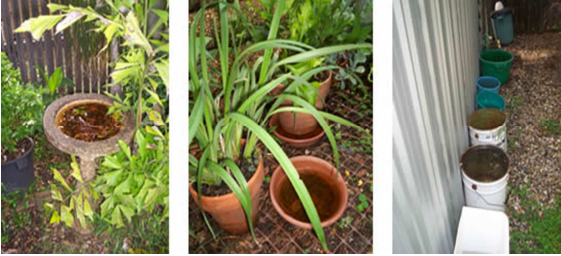
Freshwater mosquitoes breed in water that has pooled beside roads, in reserves, parks and residents' yards after a rain event.



*Fresh Water Treatment Area*

### 3. Container breeder - *Aedes notoscriptus*

Container breeding mosquitoes can be active during the day or night and prefer shaded areas around homes. They breed in containers holding rainwater including plant saucers, tyres, buckets, water tanks and blocked gutters.



*Containers around the house that breed mosquitoes*

#### There are three options for mosquito control

- Aerial control;
- On ground control; and
- Fogging control.

Aerial control is expensive and has to be repeated after periods of wet weather or high levels of tidal inundation to low lying areas.

On ground control is where Council staff apply a larvicide formulation to known breeding sites in the coastal region to target mosquitoes just after they have hatched from eggs and are still in their larval stage (still living in the water). This method is more cost effective and environmentally friendly because it is target specific on the mosquito before they can fly. These sites are regularly monitored from September to May and treated when evidence of mosquito breeding is found.

Fogging control is usually applied after a major flood event where mosquito populations are at their greatest. Fogging is only an adult mosquito knock down control with no residual effect and only lasts while the emulsion is suspended in the air. Once the emulsion is moved away by wind or gravity takes over, new mosquitoes will inhabit the area and live unaffected by the fog.

#### Council's mosquito management program

Council runs a mosquito program mainly directed towards the species of mosquitoes that carry diseases which can be transmitted to humans. While carrying out this treatment the other mosquitoes commonly known as 'nuisance mosquitoes' are also affected in this application.

Not all mosquitoes are eradicated in the region after these control programs have been applied because it is impossible to treat all breeding areas within the region.

Council officers conduct routine field surveys to monitor the number of larvae after tidal and rainfall events.

Council monitors adult numbers of both freshwater and salt marsh mosquitoes. Light traps are set in a number of locations across the Fraser Coast during the season to determine species and abundance levels.

#### What you can do to protect yourself from mosquitoes

Barrier treatments offer an extra level of protection against mosquitos for around homes. The basic concept of a barrier treatment is to form an invisible chemical barrier around the property. This form of treatment is known as reduction or minimisation of adult mosquitos, it is not an eradication treatment.

If you are unsure or have concerns about carrying out a treatment yourself, it is recommended that you engage a licensed pest control operator.

To avoid being bitten:

- stay indoors between dusk and dawn;
- use insect repellent;
- wear light coloured, long loose clothing; and
- maintain flyscreens on your house.

To reduce mosquito breeding:

- empty pot plant bases;
- cover or overturn boats/dinghies;
- screen rainwater tanks;
- chlorinate swimming pools;
- unblock roof gutters;
- empty bird bath, and;
- drill holes in old tyres holding water;
- cap brick walls;
- create a good buffer zone between your house and any surrounding thick vegetation to avoid breeding sites, and
- cut your lawn regularly.

Other options that can also be deployed are:

- introduce fish to ponds; and
- mosquito treatments are available from hardware outlets for residents wishing to treat pooled water on their own land.

For further information visit the Pest Management page at [www.frasercoast.qld.gov.au](http://www.frasercoast.qld.gov.au), or phone Council on 1300 79 49 29.

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