

FREQUENTLY ASKED QUESTIONS

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MOSQUITO MANAGEMENT PROGRAM

Why do we operate a mosquito management program?

Our community has for many years called upon the City to deliver this service. The mosquito management program operates to reduce mosquito levels in our community. This is done to minimise the health risks associated with diseases like Ross River Virus and *Mycobacterium ulcerans* and to reduce the impact of biting mosquitoes on our health, wellbeing and ability to enjoy our environment.

What are the health impacts of mosquitoes in our region?

In 2017, Victoria experienced the largest Ross River Virus outbreak in history with 1964 cases reported across the state. The City of Greater Geelong had 66 cases reported and our neighbouring council, Surf Coast Shire, had 92 cases reported (the second highest number of cases amongst all Victorian councils).

For the past 10 years we have had higher numbers of the painful ulcerative disease, *Mycobacterium ulcerans*, when compared to other municipalities in Victoria. The Department of Health and Human Services notes "The organism appears to be associated with swampy or stagnant water. The exact reservoir remains unclear. An association with mosquito bites has been proposed."

Where do mosquitoes breed?

Mosquitoes breed in standing or 'stagnant' water. The many salt marsh wetlands in our coastal environment are ideal breeding sites for mosquitoes, including the protected wetlands of Lake Connewarre and Swan Bay on the Bellarine Peninsula. Mosquito levels in these areas are monitored by our staff on a regular basis. Our staff also monitor other sites including areas like freshwater wetlands, drains and easements.

How does the mosquito management program operate?

We monitor mosquito larvae levels in known breeding sites and apply larvicide treatments when larvae levels are high.

- **Monitoring**

Our staff monitor mosquito breeding sites around the City to check for mosquito larvae. Depending on the number of larvae detected at the site, a decision is made as to whether the site requires treatment.

- **Light trapping**

Mosquito light trapping is done at various sites to monitor adult mosquito levels. The number of mosquitoes caught in each trap gives us an indication of the mosquito levels in a particular area. Light traps are a surveillance tool and are not used to reduce the overall mosquito population.

- **Ground treatment**

If breeding sites are easily accessible, our staff can treat the area manually. Breeding sites around townships like pits, drains and constructed wetlands are always treated by ground based methods.

- **Aerial treatment**

An approval from the Commonwealth Government (EPBC 2005/2132) permits aerial treatments (helicopter) for mosquito larvae in RAMSAR protected wetlands on the Bellarine Peninsula between 15 August and 15 March each year. Treating mosquito breeding sites by aerial methods is effective for reaching difficult to access areas. Aerial treatments only take place over wetlands, they never occur over townships. Helicopter application has occurred since 2005.

- **Community Education**

Each year we respond to over 100 enquiries from the public regarding high numbers mosquitoes in our community and how we manage mosquitoes. We also provide information to schools and community groups as required.

What products are used in the mosquito management program?

The City uses *Bacillus thuringiensis israelensis* (Bti) and s-Methoprene for mosquito control. These products are approved by the Australia Pesticides and Veterinary Medicines Authority for mosquito management (APVMA).

Both products are used widely in Australia and internationally to manage mosquito larvae because of their limited impact on non-target species and the environment.

Products used in our aerial treatment program are in solid form (not a liquid spray) and are dropped from a helicopter flying a low height over wetland areas that can't be reached on foot.

When do you operate the mosquito management program?

We monitor mosquito levels throughout the year. Our aerial treatment program operates between 15 August and 15 March each year in Swan Bay and Lake Connewarre wetlands. This is in line with our approval from the Commonwealth Government under the EPBC Act 1999. This also protects endangered birds that migrate to the wetlands in the winter months from disturbances from the helicopter.

Where do you do aerial treatments?

Our aerial treatments occur in Swan Bay and Lake Connewarre wetlands. We also do treatments in the adjacent Breamlea wetlands and Lake Murtagurt. We do NOT apply aerial treatments over townships or in residential areas.

Have you assessed the environmental impacts of mosquito management?

Yes, we are one of only a few councils in Australia that has been through a thorough process. We have approval under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999 to do mosquito management using the approved products, Bti and s-methoprene, in the internationally protected wetlands (RAMSAR wetlands) in our municipality.

Do you spray adult mosquitoes?

No, we do not 'fog' or spray adult mosquitoes, nor have we done so since 2010. Fogging is not specific to mosquitoes, it affects other insects and is not an effective method of sustainable mosquito management.

What can I do to protect myself and my family from mosquitoes?

You can reduce mosquito levels around your home by:

- regularly removing water in bird baths, old tyres, pot plant bases, buckets and toys,
- ensuring openings to rainwater tanks are covered with mesh, and ensuring swimming pools, spas and ponds are well maintained.
- You can also protect yourself from mosquito bites by using an effective insect repellent, those containing DEET and Picaridin are the most effective.

Where can I find out more?

The City website: www.geelongaustralia.com.au/mosquitoes the Better Health website www.betterhealth.vic.gov.au or Department of Health & Human Services: www2.health.vic.gov.au/public-health/infectious-diseases/mosquito-management-for-arboviruses