FREQUENTLY
ASKED QUESTIONS

Mosquito management program

Why does the City operate a mosquito management program?

Our mosquito management program operates to reduce mosquito levels in our community.

Mosquitoes are known carriers of viruses harmful to humans. The mosquitoes in our region are species known to carry Ross River Virus, Barmah Forest Virus and Murray Valley Encephalitis.

People who contract these viruses can become ill with fever, rash and joint pain. More severe illness is possible. While most people recover quickly, others suffer longer term symptoms.

Aerial treatments by drone assist in keeping adult mosquito numbers low by killing larvae before they can become adults. This helps to reduce the risk of an outbreak of mosquito borne illness and to reduce the impact of biting mosquitoes on our health, wellbeing and ability to enjoy our environment.

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.

Find out about the monitoring, light trapping, ground treatment, aerial treatment by drone and community education process here.

Why haven't you been doing treatments in wetlands over the last few years?

A permit from the Commonwealth Government is required under the *Environment Protection Biodiversity Conservation Act 1999* to conduct mosquito treatments on wetlands that are designated to be of international importance under the Ramsar convention. Ramsar wetlands include rare or unique wetlands and those that are important for conserving biological diversity.

The City's previous permit expired on 31 December 2020 and was extended until the end of the April 2021 mosquito season.

Treatments were then halted while we worked through the rigorous Commonwealth Government application process. We received a permit in April 2025 to restart the mosquito management program in Ramsar wetlands.

Did you previously stop the aerial treatments because of the Senate inquiry into a possible cancer cluster?

No. The permit approval process was underway prior to and unrelated to the inquiry, which has taken five years to work through.

The drone aerial treatment program is safe. Products are approved by the Australian Pesticides and Veterinary Medicines Authority (APVMA).

The products are solid and will be dispersed via an agricultural drone, allowing for focused application and minimising overall product utilisation. We don't spray.

What was the outcome from the 2020 Senate inquiry into a possible cancer cluster on the Bellarine Peninsula linked to chemical use in mosquito control programs?

The inquiry found no evidence of a higher rate of cancer overall in any areas of the Bellarine Peninsula than elsewhere in Australia.

It also found no higher number of specific cancers - breast cancer, liver cancer, non-Hodgkin lymphoma, multiple myeloma, brain cancers and leukaemia - than would be expected on the Bellarine.

More information can be found at https://www.health.vic.gov.au/chief-health-officer/cancer-rates-on-the-bellarine-peninsula

Do your treatments cause cancer?

No. We do not use broad based pesticides in our drone aerial treatment program.

The program only uses approved products suitable for mosquito control around populated areas.

Have you done any mosquito treatments at all in the last five years while working to obtain a permit?

Yes. Ground treatments have been applied to a variety of locations including Corio, Connewarre, Geelong Botanic Gardens, Lara, Point Londsdale, St Leonards and Wallington townships.

Ground treatments will continue across the region through the season to 31 May each year.

Will you be starting aerial treatments again?

Following a rigorous process, the City received a new permit on 7 April this year and is working towards meeting the permit conditions first.

An exact start date for aerial treatments by drone is yet to be determined for the 2025/26 mosquito season.

Why are you using a drone?

The drone is being used as part of our overall mosquito management program.

The drone selected by the City will allow mosquito management officers to be efficient and accurate with any aerial treatments that need to occur.

Will the drone be used to capture images/video of my property?

The drones used by the mosquito management program may capture images/video for surveillance purposes, however, these images/videos are taken within the Ramsar wetlands.

No images/videos of private property are intended to be captured by the mosquito management program. Our officers will use our drone in accordance with privacy legislation.

Is it safe to use a drone to deliver mosquito control?

Yes. The City and our pilots have all the licences and certificates required by the Civil Aviation Safety Authority (CASA).

These include a Remotely Piloted Aircraft Operator's Certificate (ReOC), Remote Pilot Licence (RePL) and a Pilot (Chemical Rating) Licence (PCRL). All flights are assessed and authorised by the City's chief remote pilot.

The drone selected by us is safe when following the CASA requirements for drones of this size.

Our pilots will ensure they meet all safety requirements for flying drones, including placing signage up to alert the public when they are in the area.

If you see our pilots out and about with our drones, please do not approach them, for your safety and theirs.

Does the drone pose a threat to the wildlife in the Ramsar wetlands?

We've conducted initial studies to determine the impact of agricultural drones on the wildlife in the wetlands. These studies showed minimal impact.

We're undertaking further ecological monitoring as part of our mosquito management program to validate the findings in the initial studies and to ensure there are no negative impacts to the sensitive wetlands from the use of a drone.

What larvicides are used in the City's mosquito management program?

We do not use broad based pesticides in our aerial treatment by drone program.

The program only uses products that have been approved by the APVMA for mosquito control around populated areas.

These products are Bacillus thuringiensis israelensis (Bti) and s-Methoprene.

The products are solid and are dispersed via an agricultural drone, allowing for more directed application and less product usage.

Where do mosquitoes breed?

Mosquitoes breed in standing or 'stagnant' water. The salt marsh wetlands in our coastal environment are ideal breeding sites, including the protected wetlands of Lake Connewarre and Swan Bay on the Bellarine Peninsula.

Mosquitoes can also breed in freshwater wetlands, drains and easements within the municipality and in containers and other stagnant water on your property.

Are there more mosquitoes this year?

Mosquito numbers are weather dependant, with many factors, including rain patterns and temperature, contributing to high numbers of adult mosquitoes.

While the City is working hard to safely reduce their numbers, mosquitoes are a natural part of the ecosystem and it's not possible to make a significant reduction in their population.

What sites does the City treat?

Officers are currently monitoring larval numbers across Greater Geelong and will be continually assessing and reviewing potential breeding sites over the coming months. This includes applying ground control treatments to drains, dams, and easements, where it is safe to do so.

We apply ground treatments (in non-Ramsar listed wetlands) at a variety of sites on across the region from August through to May each year.

We will re-commence aerial treatments by drone once we meet all requirements of our EPBC Permit.

View common mosquito breeding sites around townships within our municipality.

What areas will be most impacted by mosquitoes?

Mosquito numbers and locations vary from season to season and within a season due to weather patterns.

It's important that community members work with the City to protect themselves and their homes appropriately.

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.

Why do you only treat mosquitoes in spring and summer?

Generally, mosquito larvae numbers are low during the winter months and monitoring and treatment during this period is minimal.

To be effective, our treatment regime must be done in the larval stage to prevent adult mosquitoes from emerging from water and flying into populated areas.

Officers are monitoring mosquito larvae in known breeding sites and applying larvicide treatments when levels are high.

Can I report increased mosquitoes on public land?

Yes. Contact us to report concerns about mosquitoes on public land. It's important to note that mosquitoes are a natural part of the ecosystem in our region and it's not possible to eliminate them all.

What can I do to protect myself and my friends and family?

It is important that community members work with the City to protect themselves and their homes appropriately.

To prevent high mosquito numbers in your local community, there are steps you can take to stop mosquitoes breeding on your property:

- Inspect your property for water that is still. This includes horse water troughs, bird baths, pet water dishes, old tyres, buckets, tins, rubbish bins, and pot plants.
- Ensure containers are either emptied of water weekly or removed.
- Use sand to absorb excess water in pot plants.
- Maintain any swimming pools and empty them when not in use.
- Make sure fishponds are stocked with fish.
- Overturn boats and dinghies or remove drain plug.
- Cover openings and inlets to water tanks, wells etc with screens or gauze (minimum 1mm mesh).
- Keep roof gutters repaired and free of debris.
- Maintain lawns and gardens to remove shelter for mosquitoes.
- Mend leaking taps.

Avoid being bitten by:

- Wear long, loose-fitting, light-coloured clothing. Mosquitoes are attracted to dark colours.
- Avoid outdoor activities at dawn and dusk when mosquitoes are most active but note that some mosquitoes in coastal areas also bite during the day.
- Use an effective repellent on exposed skin.
- Repellents containing the active ingredient 'DEET' or Picaridin are most effective against mosquitoes.

- Take care when applying repellents and always read the product label before use.

Buruli ulcer

Buruli ulcer, also known as the Bairnsdale ulcer, is a skin disease caused by the bacterium *Mycobacterium ulcerans*.

The disease is not transmissible from person to person, however there is evidence that both mosquitoes and possums play a role in disease transmission in Victoria.

Where can I find out more?

- The mosquito management section on our website
- The Buruli ulcer section on our website
- Better Health - Protecting yourself from mosquito-borne diseases
- Better Health Channel - Buruli ulcer
- Better Health Channel - Japanese Encephalitis
- Department of Health - mosquito-borne diseases