

Prevention

- ▶ **Avoid** – peak mosquito activity times, one to three hours after dawn and prior to and following dusk.
* Some species of mosquito will bite during daylight hours.
- ▶ **Cover up** – by wearing long loose fitting and preferably light coloured clothing that reduces skin exposure.
- ▶ **Apply** – mosquito repellents when outdoors if mosquitoes are active.
* The most effective repellents are those that contain DEET or Picaridin.
- ▶ **Secure** – doors and windows with insect proof screens to prevent mosquitoes entering housing.
- ▶ **Assess** – your backyard for potential mosquito breeding habitats. Drain water from pot plant bases, screen water tanks, remove containers that could hold water and regularly clean water bowls.



Peel Mosquito Management Group

The Peel Mosquito Management Group is the largest mosquito management partnership of its type in Western Australia. Members include:

- ▶ Department of Health
- ▶ City of Mandurah
- ▶ Shire of Murray
- ▶ City of Rockingham
- ▶ Shire of Waroona
- ▶ And with assistance, The University of Western Australia

Mosquitoes are a part of life in the Peel Region.

Without the programs operation, mosquito borne disease and mosquito populations would be significantly higher in the Peel Region.



Saltmarsh breeding areas, wetlands, drains and other potential breeding sites are monitored and treated regularly for mosquito activity.

For further information on mosquito management efforts undertaken by your council or for information on Ross River or Barmah Forest Virus prevention contact your relevant council.

▶ City of Mandurah

Environmental Health Services
Phone: 9550 3810
Email: health@mandurah.wa.gov.au

▶ Shire of Murray

Environmental Health Officer
Phone: 9531 7777
Email: mailbag@murray.wa.gov.au

▶ City of Rockingham

Health Services
Phone: 9528 0315
Email: council@rockingham.wa.gov.au

▶ Shire of Waroona

Environmental Health Officer
Phone: 9733 7800
Email: warshire@waroona.wa.gov.au



Mosquito Management in the Peel Region



The Peel Harvey Estuary and its associated river systems form a variety of habitats that sustain a diverse range of plant and animal species found within the Peel Region.

Large tracts of saltmarsh are one such habitat which provides ideal conditions for saltmarsh mosquitoes. These saltmarsh mosquitoes are known carriers and can transmit Ross River virus (RRV) and Barmah Forest virus (BFV) and can seriously impact the lifestyle of residents and visitors to the Peel Region when conditions promote their breeding.

Since the early 1990s local governments in the Peel Region in partnership with the Department of Health have successfully implemented a mosquito management program aimed at reducing human cases of mosquito borne disease and minimising the nuisance caused by mosquitoes.

Given that mosquitoes don't recognise local government boundaries it is essential that we work cooperatively to achieve effective and sustainable mosquito management.



People living within up to five kilometres of saltmarsh or brackish wetlands (i.e. estuaries and tidal rivers) as well as freshwater wetlands are at greater risk of contracting Ross River and Barmah Forest Virus diseases and should take particular precaution to avoid mosquito bites. The peak time for the diseases is generally between September and January.

► **Managing Mosquitoes**

Tides that flood saltmarshes lead to mosquito eggs hatching in the Peel Region. Tides in the Peel Harvey Estuary can rise unexpectedly due to low pressure systems, northerly winds and local climatic events. As a guide when tides in the Peel Region reach 0.76m, hatching of mosquito eggs is likely to be initiated on most breeding sites.

Council Mosquito Operations personnel monitor breeding sites to assess the extent and location of mosquito breeding and determine when to conduct treatments.

Larviciding is the main method of mosquito reduction in the Peel Region. This technique targets the mosquito larvae before they emerge as adults and is the most effective control method to reduce adult populations. As large areas (up to 600hectares of saltmarsh) need to be treated the larvicides must be applied by helicopter.

The two main products used are sand based S - methoprene and a liquid product called Bti (*Bacillus thuringiensis israelensis*).

These are the most environmentally appropriate products available and pose very low toxicity to non target organisms and public health.

Many people associate mosquito management with fogging.

In our conditions fogging has proven ineffective and does not specifically target mosquitoes. Targeting mosquitoes while they are in their larval stage is a far more efficient method of managing mosquitoes in our environment.

Whilst the vast majority of the Peel Mosquito Management Group's larvicide treatments are effective in reducing mosquito populations the limitations of the larvicides and environmental conditions do not permit total eradication. This is why even after successful treatments there will always be some residual mosquito activity.

Larviciding treatments are not always effective due to environmental conditions and it is



important that individuals take personal protective measures.

Mosquito-borne diseases in the Peel Region. RRV and BFV are the two most common mosquito borne viruses that cause human disease in Western Australia. In nature RRV and BFV are passed back and forth between animals and mosquitoes. The only way that humans can catch the disease is by being bitten by a mosquito that is carrying the virus.

► **Symptoms**

Symptoms for both viruses are similar and can vary from person to person. Symptoms include painful and or swollen joints, sore muscles aching tendons, skin rashes, fever and tiredness. Other symptoms may also be experienced.

If you feel unwell after being bitten by a mosquito or following contact with mosquitoes arrange to see a Doctor as soon as possible.

Currently there is no vaccine or specific medical treatment for these diseases. For more detailed information on RRV or BFV contact the Department of Health on 9222 4222 or visit www.health.wa.gov.au.

