Rainwater storage and mosquito breeding

Collecting and storing rainwater in rainwater tanks is a great way to conserve our most precious resource, especially during drought conditions. However, like other water-holding receptacles, tanks can become breeding sites for mosquitoes, including *Aedes aegypti*, which can carry the potentially deadly dengue virus, and other species that carry diseases such as Ross River virus and Barmah Forest virus.

**Prevent mosquito breeding**

In Australia, the dengue mosquito (*Aedes aegypti*) is currently found mainly in tropical parts of northern Queensland as well as in some inland and coastal population centres of Queensland. Although it is not currently found in South East Queensland, it has been in the past and was involved in a major dengue fever epidemic in Brisbane in 1941 – 43.

Regular maintenance of rainwater tanks and other water storage receptacles is important to eliminate potential breeding sites and prevent mosquito breeding.

**Recommended minimum maintenance for rainwater tanks**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Tasks</th>
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<tbody>
<tr>
<td>Every 3 months</td>
<td>Check tank, mosquito-proof screens and overflow outlet for rips, holes, cracks and defects. Clean leaf guards and mosquito screens on external overflows (rainheads).</td>
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<tr>
<td>Every 6 months</td>
<td>Clean leaves and debris from roof and gutters. Prune overhanging trees. Check inside the tank for signs of mosquitoes and larvae (wrigglers).</td>
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If you detect mosquitoes in a tank, locate and close the entry point.
How to help in 3 easy steps

1. Rainwater tank openings
Under the Public Health Regulation 2005, all rainwater tank openings must be screened with mesh (no larger than 1 mm in size) to prevent adult mosquitoes entering the tank and mosquito eggs, larvae and pupae from being washed in from pipes, gutters or the roof.

2. First flush devices
During dry weather, contaminants such as bird and animal droppings, dust and sediment, gather on your roof and may wash into your tank when it rains.

First flush devices divert these pollutants, along with the initial flow of water, into the chamber of the water diverter. As the water level rises in the diverter chamber, the ball floats and once the chamber is full, the ball rests on a seat inside the diverter chamber preventing any further water entering the diverter. It then automatically directs ‘clean’ water along the pipe system into the tank.

First flush devices are only required where water from the rainwater tank is connected to the kitchen, hot water services, showers or wash basins. First flush devices require regular maintenance to ensure that they do not become blocked with stagnant water. Stagnant water can become a breeding ground for mosquitoes which may transmit harmful viruses.

Recommended minimum maintenance for first flush devices
Every 3 months Empty and clean the first flush device of debris and stagnant water by unscrewing the end-cap. Clean the slow release valve and associated tubing.

3. Containers holding water
Collecting rainwater in receptacles other than approved rainwater tanks is not recommended because of their mosquito breeding potential.

Mosquitoes such as Aedes aegypti (known to carry the dengue virus) breed in containers that hold fresh water. This species does not live or breed in saltwater, mangroves or rivers.

Recommended check for mosquito breeding sites
Every Week Empty containers that can hold water and store them in a dry place. Throw away any you don’t need.

In Queensland, under the Public Health Regulation 2005, on-the-spot fines to the value of 4 penalty units can be issued to people who accumulate water that is a breeding ground for mosquitoes. See the City website for information about penalty unit values.

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