## A Not-So-Welcome Sign Of Summer...



Each year, when the weather warms that high pitched whine signals the annual emergence of mosquitos.

In addition to the nuisance of adult mosquitoes, they can pose serious health-related concerns for people and animals.

There are some simple actions you can take right in your own backyard to help reduce local mosquito populations and make summer a little more comfortable.



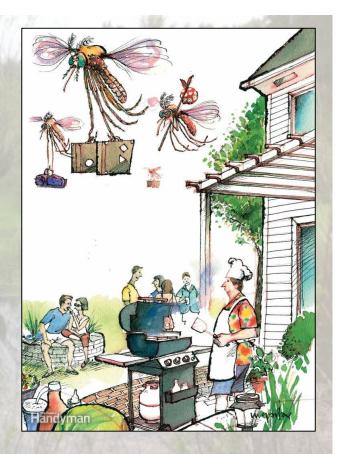
#### Who We Are

Morrow BioScience Ltd. (MBL) is the longest established mosquito management firm in British Columbia - we have been managing mosquitoes for over 30 years. Using an integrated pest management approach, MBL conducts larval mosquito control. The control products and techniques used have the least possible impact on the ecosystem. MBL's experienced staff members are happy to provide clients and residents with excellent service. Please contact us if you have any questions.

#### **Contact Information**

Toll Free: 1.877.986.3363 Email: info@morrowbioscience.com

@morrowbioscience
@MorrowMosquito
@morrowbioscience
www.morrowbioscience.com



## MOSQUITO PREVENTION TIPS

Simple self-protection measures and ways to reduce mosquito populations around the home

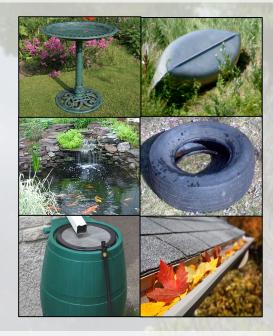
#### **Quick facts:**



- Floodwater mosquito species lay eggs in damp substrate along flooding corridors.
- Floodwater mosquito eggs are triggered to hatch by the presence of water at sufficiently warm temperatures (as low as 6°C - 8°C).
- While most species fly only a few kilometers away from breeding areas, some species found in salt marshes can fly up to 160 km.
- In warm conditions, it can take less than a week for a mosquito to mature from egg to adult.

## What you can do:

- Change the water in bird baths regularly.
- Store canoes, wheelbarrows and unused buckets upside down.
- Keep ponds clean of overgrowth and establish water flow, if possible.



- ✤ Safely dispose of old tires.
- Keep rain barrels screened or covered.
- Remove leaves from gutters to prevent water from pooling.
- Fix leaky faucets.

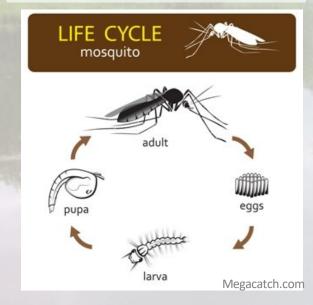
### More prevention:

- Reduce outdoor activity at dawn and twilight, as these are active periods for mosquitos.
- Avoid the use of colognes and perfumes.
- Wear light-colored clothing and cover up.
- Use registered insect repellents (they have a PCP number), remembering to follow application instructions.
- Monitor standing water (ditches, ponds, etc.) on your property for mosquito larvae.



#### **Target Species**

The target species within this program are floodwater mosquitoes. These mosquitoes lay eggs on damp substrate near lakes, rivers, streams, or even tidal flats. The eggs are triggered to hatch in the presence of sufficiently warm water, typically occurring during the spring freshet.



#### Why Larval Mosquitoes?

- Larval mosquito control is more efficient and effective than adult control.
- Larval mosquito control is more precise than adult spraying.
- Most larval mosquito control products have a lower environmental impact than adult control products.

## Social and Environmental Sustainability Efforts

- Each year, MBL purchases carbon offsets to compensate for the fuel usage within each of our programs.
- MBL is a steward of local watersheds, routinely participating in river clean-up days and has adopted a portion of the Vedder River.
- MBL has donates funds toward wetland restoration efforts across the province.
- MBL volunteers staff time to educate and engage school groups about healthy ecosystems and mosquito control.
- MBL donates bird and bat houses to install in local wetlands, with the hopes of increasing mosquito predators.

#### **Contact Information**

Toll Free: 1.877.986.3363 Email: info@morrowbioscience.com





# MOSQUITO CONTROL INFORMATION

What is being done around your community to reduce mosquito annoyance

#### Who We Are

Morrow BioScience Ltd. (MBL) is the longest established mosquito management firm in British Columbia - we have been managing mosquitoes for over 30 years! Our team is comprised of biologists, field technicians, and GIS specialists. Our goal is to provide clients and residents with excellent mosquito control.



#### What We Do

Using an integrated pest management approach, MBL conducts larval mosquito control for floodwater mosquitoes. Control products and techniques utilized by MBL are designed for high efficacy and to have the least possible impact on the ecosystem.



#### **Our Methodology**

- Floodwater mosquito development sites are consistently monitored for larvae from April – August.
- If larvae are found in high enough numbers and in the correct larval stages (3<sup>rd</sup> – 4<sup>th</sup> instar), the site is treated.
- Sites are treated with Aquabac<sup>®</sup> a bacterial larvicide.
- Sites may be treated using a backpack blower, by hand, or by helicopter.
- Post-treatment monitoring occurs to ensure the treatment was successful.



#### **Larval Control Products**



- Aquabac<sup>®</sup> is used for larval mosquito control.
- The active ingredient in Aquabac<sup>®</sup> is a natural, soil-borne bacterium called Bacillus thuringiensis israelensis (Bti).
- The carrier for Bti is corn cob granules.
- When ingested by mosquito larvae, the Bti quickly effects the mosquito's gut, causing larval death.
- The granules come in a variety of sizes to target different mosquito development areas.
- This product is relatively target-specific, with few non-target effects.
- The field efficacy for Aquabac<sup>®</sup> is usually 80-90%.