

Case Study:

Biological control of biting insects in
Trois-Rivières



Using Bti to control biting insect populations in urban areas

GDG Environment
430 Saint-Laurent Street
Trois-Rivières, Québec G8T 6H3

*"For three years now, the City of
Trois-Rivières has been controlling
biting insects in all sectors
surrounding the city centre."*

JULIEN ST-LAURENT
ENVIRONMENTAL SPECIALIST
CITY OF TROIS-RIVIÈRES

Summary

Since 2008, GDG Environment has been using a biological agent to control biting insects in Trois-Rivières in order to reduce the nuisance caused by mosquitoes and black flies. The service was first offered in Trois-Rivières-Ouest and subsequently expanded to all remaining sectors.

Challenges

Before the launch of the biological control program of biting insects, residents of Trois-Rivières were unable to enjoy summer evenings outdoors without being bothered by mosquitoes and black flies. Insect bites were common and represented a source of profound dissatisfaction. The City of Trois-Rivières decided to call upon GDG Environment to find a solution to this issue.

Our team faced a considerable challenge, given the presence of multiple wetlands in the area, including the Red Mill and Baie des Mines bogs. In 2017, an area of 5,440 hectares was treated through the biological control program of biting insects delivered by GDG Environment.

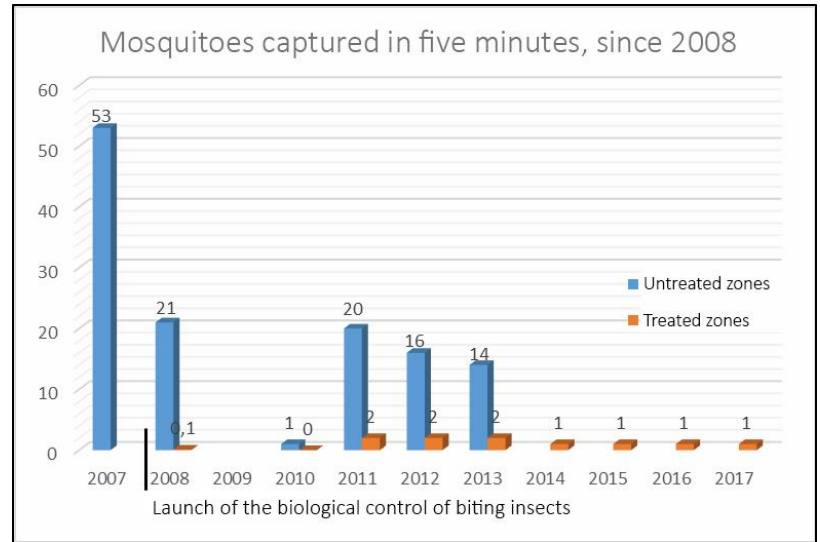
Methodology

From the initial mandate in 2008, the team of experts at GDG Environment mapped all the breeding grounds of biting insects in the area. The treatment operations were then planned and carried out. A biological larvicide, known as Bti, was applied in the spring to all treatment locations previously identified in order to control the mosquito and black fly populations. Bti acts during the earliest stages of the life cycles of biting insects, which explains its efficiency. In addition, Bti does not cause any harm to the environment.

Since 2008, we have continued using this method and have improved it by adding helicopters and planes to our operations. Aerial spraying activities are very effective for the rapid treatment of large areas of land surrounding urban zones.

“The operations generate major benefits for residents, who can now enjoy outdoor activities in peace from spring to early September.”

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* 2009 data not available.

Results

The biting insect control program in Trois-Rivières is a success. A significant reduction in the mosquito and black fly populations has been noted in the area, as indicated in the above table. The graph shows that untreated zones have significantly more mosquitoes (up to 53 mosquitoes captured in 2007) compared to treated zones. In fact, since GDG Environment has started conducting treatment activities in Trois-Rivières, an average of only 1 or 2 mosquitoes are captured in treated zones over five minutes using an insect net. Residents of Trois-Rivières enjoy better quality of life and the opportunity to make the most of outdoor activities.