

To: CAO for the Regional and Corporate Services Committee

Date: 2019-11-14

From: Lance Lilley, Manager of Environmental Services

File No: 2320-83-001

Subject: Nuisance Mosquito Control Program 2019 Year End Report

RECOMMENDATION

THAT the Fraser Valley Regional District Board receive the FVRD's Mosquito Control Program 2019 Year-End Report from Morrow BioScience Ltd., summarizing the nuisance mosquito larvae monitoring and control efforts from 2019.

STRATEGIC AREA(S) OF FOCUS

Support Environmental Stewardship
Support Healthy & Sustainable Community

PRIORITIES

Priority #3 Flood Protection & Management

BACKGROUND

The Fraser Valley Regional District (FVRD) operates an annual Nuisance Mosquito Control Program with an objective of reducing the abundance of floodwater mosquitoes to tolerable levels. This program includes monitoring water levels, sampling for mosquito larvae, conducting larvae control, as well as conducting mapping, reporting, and public education. The FVRD's contractors for this service, Morrow BioScience Ltd., have provided a year-end report summarizing their efforts during the 2019 mosquito season.

DISCUSSION

Floodwater mosquito larvae become activated during the spring freshet when the Fraser River water levels begin to crest. Typically, the higher the Fraser River reaches during the spring, the more mosquito larvae that hatch and become active. In 2019 the Fraser River peaked on June 5th at 4.40m as measured at the Mission gauge (Figure 1). This peak was significantly lower than was observed in 2018 (May 20 at 5.98m) which resulted in fewer mosquito larvae in 2019 compared to last year.

605 hectares of flooded mosquito breeding habitat was treated in 2019, using both hand applications and aerial methods, applying 4,609 kg of Aquabac (*Bacillus thuringiensis israelensis*). This was much less than what was needed in 2018, where over 16,000 kg of product was applied over 1855 hectares due to the high water seen last year. As a result, very few complaint calls were received in 2019.

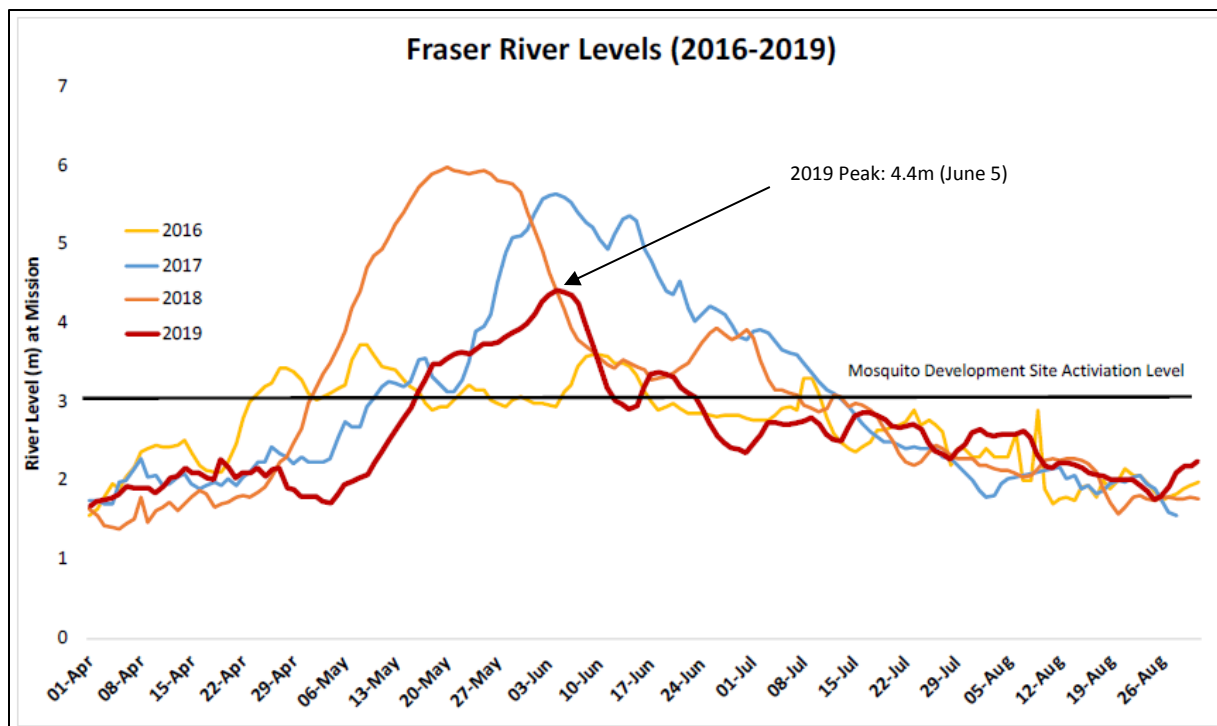


Figure 1. Fiver River levels (m) recorded at the Fraser River (Mission gauge, 08MH024) as reported by the River Forecast Centre: 2016-2019. Mosquito larvae typically start to become active when river levels exceed 3m (i.e., when above the black horizontal line).

Due to its location and its low water, Matsqui Island remains a significant breeding ground of floodwater mosquitoes within the region. In 2018, specific locations on the Island that were mosquito breeding sites were identified and mapped. These sites are amongst dense vegetation and are difficult to treat by air due to limited visibility and thick foliar interception of pesticide. Access routes to allow for hand treatments were maintained in 2019 to allow for precise monitoring and for more effective treatment when needed during 2020's freshet.

COST

Costs for the nuisance mosquito control program remained within budget for 2019.

COMMENTS BY:

Stacey Barker, Director of Regional Services Reviewed and supported.

Mike Veenbaas, Director of Financial Services Reviewed and supported.

Jennifer Kinneman, Acting Chief Administrative Officer Reviewed and supported.