
FREQUENTLY ASKED QUESTIONS

April 17, 2015

Ministry of Forests, Lands and Natural
Resource Operations

Surrey-Cloverdale-Delta Gypsy Moth Spray Program 2015

Treatment

Q: Why are you aerial spraying in Surrey-Cloverdale and Delta?

- It is needed. The moth population is growing and could easily spread to other areas via the area's highway, container, rail and shipping routes. If untreated, the moth could cause significant damage to the area's forests, orchards, farms, and urban trees.
- Monitoring in 2014 found over 200 adults, pupae and many egg masses, indicating a growing population.

Q: Why didn't you spray in Surrey-Cloverdale or Delta last year, or the year before?

- This is the first year the treatment became necessary and the trapping data could identify a treatment area. The 2014 trapping results indicate there is a growing gypsy moth population that is successfully reproducing. It poses a significant threat to our environment and local economy.

Q: How many moths were found?

- In Surrey, 197 moths were found in 32 traps between 64th Avenue and 176th (Cloverdale) Avenue, as well as egg masses, indicating a dispersed and breeding moth population.
- In Delta, seven moths were trapped within a confined area that is heavily vegetated and difficult to survey. The gypsy moth population is located at the end of Watershed Park which leads to Burns Bog. This increases the urgency to eradicate this population before it moves into the sensitive Burns Bog.

Q: Is an aerial spray program really needed for 204 moths?

- The number of moths trapped is not a direct indicator of population size but serves to define the area over which the population is most likely growing.
- The risks of a dispersed and breeding invasive species in the middle of a busy rail and shipping hub cannot be underestimated. The treatment is needed, and it is needed this year.

Q: Why not ground spray?

- A ground spray will be conducted over 26 hectares in an area south of 56th Avenue and west of 176th Street in Surrey. The remaining area over which the moths have been detected is too large to effectively treat by ground. Ground applications would not be able to be completed before the population has had a chance to spread over a larger area, requiring an even larger program in subsequent years.

Q: What is the alternative to aerial spraying?

- There is no alternative treatment as effective as aerial spraying for this particular infestation. Each site is evaluated to determine the most effective combination of treatments, taking into consideration many factors including the number and distribution of moths, the amount and suitability of host trees, and size and ease of access to the area.

Q: Who / Which company will apply the treatment?

- The Ministry advertised a contract for the treatment application and Zimmer Air Services Inc. was the successful proponent. The company is certified by Transport Canada and meets all provincial and safety requirements.

Q: Why is the spray being applied by helicopter this year, instead of fixed-wing aircraft?

- The aerial spray contractor was selected through a competitive bid process. This year, the winning bidder is using helicopters rather than a fixed wing aircraft used in previous aerial treatments in B.C. Either aircraft can perform the task.

Q: What effect will the spray have on my car?

- Cars and other items that you want to keep clean should be covered or brought indoors otherwise the items can be washed with water, soap and a bit of scrubbing to remove deposits. The spray droplets, once hardened, will remain for about a week depending on the amount of wind, rain and sun exposure. Washing immediately after the spray before it hardens will make cleaning easier otherwise pre-moistening the droplets with a wet towel will also soften them to speed removal. The droplets are non-toxic and benign and no special precautions are required in handling them other than normal hygiene practices.

Health / BTK

Q: What is in the spray and what is Btk?

- The treatment involves a Btk product (Foray 48B) that can be applied to certified organic farms without the farm losing its certification.
- The active ingredient in Foray 48B, is *Bacillus thuringiensis var Kurstaki* (Btk), naturally occurs in urban, agricultural and forest soil around the province. It is only effective in a caterpillar's stomach, and is specific to their digestive system. Mammals—humans, livestock and pets - birds, fish, amphibians, spiders and bees are not impacted by Btk.
- Public safety is paramount. Health Canada reviews all relevant research and regulates the use of pesticides and has approved the Btk product (Foray48B) used for aerial applications over populated areas. They are the experts and we rely on their expertise.
- The product is biodegradable and breaks down within seven days due to exposure to sunlight.
- Btk is widely used and deemed safe by governments and farmers around the world to protect crops and natural areas. It is manufactured by Valent Canada, Inc.

Q: Is the spray harmful to humans?

- Public safety is paramount. Btk does not harm humans, mammals, birds or fish.
- The treatment involves a product that can be applied to organic farms (Foray 48B) without affecting the farm's organic certification.
- Health Canada reviews all related research and regulates the use of pesticides. They have approved the product we are using for aerial application over populated areas. They are the experts and we rely on their expertise.

Q: I have heard of people who experienced symptoms when exposed to Btk. How do you know it isn't harmful?

- Health Canada has approved the product for aerial application over populated areas.
- Health studies conducted in the Capital Regional District during an extensive (12,000 hectare) aerial spraying in 1999 found no adverse health effects.
- It is one of the few products that can be sprayed over water bodies including drinking water reservoirs—as was done in 1992 in Vancouver's watershed and 1999 in the Sooke watershed.
- The spray can also be used on produce up to the day of harvest and is approved for use on certified organic farms.

Q: If the spray is safe, why are you asking people to stay indoors during the spray? Why do schools, daycares, elderly care facilities need to be notified separately and in advance?

- Although Health Canada does not restrict the use of the spray over populated areas, we provide advice to minimize exposure to people if this is their personal choice to do so.
- Out of an abundance of caution, permit conditions require us to provide broad notification of the spray.
- The Ministry of Health also has a health information sheet on gypsy moth spraying in six different languages: <http://www.healthlinkbc.ca/healthfiles/hfile90a.stm>

Q: What about pets, butterflies, insects and birds. What harm will come to them?

- Btk is effective only when in a caterpillar's stomach, and is specific to their digestive system. Mammals, birds, fish, amphibians, reptiles, spiders, bees and insect species that do not produce caterpillars are not impacted by Btk.
- The area sprayed is too small to impact butterfly populations on a species level. Butterfly populations within the treatment area are impacted, but recover and re-establish to former levels within three years. Gypsy moth infestations result in defoliation of many host species, which reduces habitat for other butterfly species.

Public Awareness / Communication

Q: What efforts are being made to inform the public and stakeholders?

- We recognize some people may be inconvenienced by the program and welcome calls, toll-free, during business hours at 1-866-917-5999 to ask questions or learn more about the program. Information is online at www.gov.bc.ca/gypsymoth
- The line is staffed during business hours and provides a recorded voice message with up to date treatment schedules and information, 24 hours-a-day.
- We've tried our best to ensure residents are aware—all permit and treatment steps are being advertised in Delta, Surrey, Cloverdale and South-east Asian language newspapers. Presentations have been given to Surrey and Delta councils, and a public open house was held in Surrey on March 3.
- Media releases will be sent to media one week in advance of each proposed spray date, and updates will be provided through Facebook/BCProvincialGovernment and @BCGovNews.

Process / program

Q: Are other treatments planned in B.C. this year?

- No.

Q: How does the permit process work?

- The provincial Ministry of Environment issues permits regarding aerial spraying under the Integrated Pest Management Act. On October 24, 2014 the Ministry of Forests, Lands and Natural Resource Operations applied for a permit. The Ministry of Environment accepts public submissions regarding the issuance of the permit, prior to making their decision.
- The permit was issued on February 16, 2015.
- Within 30 days after it is issued, terms and conditions within the permit can be appealed through the Environmental Appeal Board. Ground applications do not require a permit, but are conducted under the licence of the applicator hired to carry-out the treatment.
- No appeals were filed with the Environmental Appeal Board.

Q: How is the gypsy moth controlled?

- The program provides a site- and condition-specific response for each location.
- Pheromone trapping is the largest component of the moth control program. The traps target males, which follow the flightless females' pheromone to mate with them. The trapping program allows us to determine where an active gypsy moth population is located.
- In some cases, high volumes of traps are used to intercept nearly all of the males, thereby preventing eggs from being fertilized and new moth generations. This non-pesticide treatment is called "mass trapping" but is only suitable for smaller, more isolated infestations than that found in the Surrey treatment areas.
- Ground and aerial spraying are also part of the response and is needed in large areas that have indicators of an establishing moth population (egg masses, caterpillars, high trap catches, repeated trap catches in the same area).
- The program works. It has prevented gypsy moth from establishing in B.C. for the last 30 years. Furthermore, identical programs in the Western U.S., combined with B.C.'s have successfully prevented gypsy moth from establishing anywhere in Western North America.

Q: Why is the gypsy moth a problem?

- Gypsy moths are a threat to some native forests, orchards and urban trees. They have defoliated large areas in eastern Canada and the U.S., in both forests and communities.
- The moths pose a risk to the province's environmental and economic health. In the past, quarantines have been imposed on B.C.'s nursery products because of the threat of the gypsy moth spreading. They also pose a risk to agricultural products like apples, blueberries and so on.
- Though our forests are softwood based, Garry oak, arbutus, red alder, aspen, cottonwood, maple, orchard fruit and nut and many species of urban ornamental trees would be impacted.
- Over 300 tree and shrub species are known hosts. Many of these are valuable agricultural crops and ornamental trees found in urban areas.
- The U.S. border could be restricted to some B.C. products. These commodities would have to be inspected adding both time and expense to our exported goods. Commercial and non-commercial vehicle traffic into the U.S. could also be inconvenienced by a thorough inspection.

Q: How did they get here?

- Gypsy moths are only dispersed long distances by being accidentally transported by people – usually on vehicles or equipment from infested areas in Eastern Canada or the Eastern U.S.
- One reason why the Surrey and Delta infestations are a concern is the high population of the gypsy moth combined with the close proximity to the U.S. border (within 12 km).

Q: Where in B.C. could the gypsy moth become established?

- In our analysis based on temperature requirements for insect development and host distribution, southern Vancouver Island, the Lower Mainland and the Okanagan/Kootenays would be ideal habitat for Gypsy Moth.
- Those areas include the province's fruit and nut growing centres.

Q: What about just outside the spray zone? What if it's windy? What if it's rainy?

- Spraying is halted when average wind speeds exceed 8 km/h. Wind speed is constantly monitored prior to and during the spray.
- A 750-metre area around the spray boundary is monitored for any spray deposit
- The spray washes off. Vehicles, outdoor furniture, toys, etc. can be covered or moved inside beforehand or cleaned with soap and water afterwards. If left, the spray will dissolve after about one week's exposure.
- Significant rainfall before, during and after the spray can greatly reduce the effectiveness of the spray. Thus, treatments are avoided when it is raining or there is a threat of rain immediately after the spray. A minimum of an hour of dry weather after the spray is required for the droplets to stick onto the foliage.

Q: What would happen if the spray was cancelled?

- The alternative is likely to be an increased gypsy moth population and eventual infestation.
- The Canadian Food Inspection Agency (CFIA) could impose a regulated area around the known infested areas and restrict the movement of materials known to harbour gypsy moth.
- These include nursery and agricultural products, Christmas trees, and wood with bark. It may also include outdoor household articles, vehicles and potentially other items.
- All of these items would require an inspection certificate before being allowed to be moved from the restricted area.
- There is also potential for quarantines to be placed on various goods at the U.S. border. CFIA may impose mandatory vehicle inspections on traffic. Of equal concern is the impact American regulatory actions could have on the flow of both people and products by road, rail and ferry into the United States.

Q: How much will the program cost?

- Preliminary cost estimate for the 2015 spray program is about \$1.3 million.

Gypsy Moth Information Line: 1-866-917-5999

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