



## REPORT TO MAYOR AND COUNCIL

**PRESENTED:** JUNE 14, 2021 - REGULAR MEETING  
**FROM:** ENGINEERING DIVISION  
**SUBJECT:** DRINKING WATER CONSERVATION BYLAW UPDATE

**REPORT:** 21-71  
**FILE:** 5600-10

### RECOMMENDATION:

**That** Council grant first, second, and third reading to Township of Langley Drinking Water Conservation Bylaw 2018 No. 5321 Amendment Bylaw 2021 No. 5716.

### EXECUTIVE SUMMARY:

Consistent with Metro Vancouver's Drinking Water Conservation Plan, Township of Langley Drinking Water Conservation Bylaw 2018 No. 5321 imposes restrictions on when municipal water users are permitted to water lawns from May 1 to October 15. Watering outside of designated times is only permitted when a property obtains a Water Exemption Permit for the purpose of starting a new lawn.

The European Chafer Beetle (the Beetle) is an invasive insect species that has affected select areas of Metro Vancouver over the past two decades. The Beetle lays its eggs in lawns during the summer. Hatched larvae feed on the roots of grass and serve as a food source for birds and other predators. The weakened root structure of the affected grass combined with foraging by predators often results in significant damage to infested lawns.

Infested lawns are treated through the application of nematodes to the affected area in late July, shortly after the Beetle larvae have hatched. The treatment requires keeping the affected area moist for a minimum of two weeks which can require daily watering in the month of July which is not permissible pursuant to current regional restrictions. Accordingly, affected property owners who wish to control this invasive species are unable to do so as the existing bylaw does not allow issuance of a Water Exemption Permit for the purpose of nematode treatment.

Revisions to Township of Langley Drinking Water Conservation Bylaw 2018 No. 5321 are required to allow municipal water users to obtain a Water Exemption Permit for the purpose of treating lawns infested with the Beetle, that may otherwise result in significant damage and community unsightliness.

### PURPOSE:

To seek Council's approval of amendments to Drinking Water Conservation Bylaw 2018 No. 5321 to allow issuance of Water Exemption Permits for the purpose of treating lawns infested by the European Chafer Beetle.

**BACKGROUND/HISTORY:**

Properties in the Township of Langley obtain their water via private wells regulated by the provincial government or from the municipal water supply. Municipal water is a blend of water purchased from Metro Vancouver mixed with local ground water. Metro Vancouver's Drinking Water Conservation Plan restricts non-essential uses of water seasonally. Council's adoption of the Drinking Water Conservation Bylaw aligns the municipality with this plan. Stage 1 restrictions automatically come into effect May 1 and focus on reducing municipal water use by limiting the days and times users may water lawns and gardens. Three additional stages of restrictions may be declared if necessary, to reduce water consumption by placing further restrictions on lawn/garden watering and limiting water use for non-essential reasons such as filling of pools, fountains, or washing of vehicles.

During Stage 1 and Stage 2 restrictions, municipal water users may obtain a Water Exemption Permit from the municipality for the purpose of establishing a new lawn. Water Exemption Permits allow for a property to water freshly seeded or turfed areas any day from 4:00am to 9:00am for a period of 21 days, with the option to obtain one extension for a further 21 days. Water Exemption Permits may not be issued for any other reason under the existing bylaw.

**DISCUSSION/ANALYSIS:**

The Beetle is an invasive species first identified in Metro Vancouver in 2001. Over the past two decades the Beetle has expanded its range to include most municipalities in the region. The Beetle lays its eggs in lawns early in the summer with eggs hatching in late July. Hatched larvae feed on the roots of grasses and continue to mature in the ground until they emerge as an adult beetle. The adult Beetle then lays its own eggs, restarting the cycle. While larvae mature in lawns they act as a food source for birds, skunks, racoons, and other foraging animals. Predators peel back the lawn of infested properties to gain access to larvae made easier by the grass's weakened root system. This can leave affected lawns with significant damage requiring remediation by the property owner.

Infestations of the Beetle can be effectively managed by applying nematodes, a microscopic worm, to infested areas shortly after larvae have hatched which is typically in late July. Nematodes control the infestation by invading the body of the larvae and breaking it down as a food source. In order for treatment to be successful, watering the treatment area before application and then keeping it moist for 2-3 weeks is required. This can require watering more frequently than the two mornings per week currently permitted by Drinking Water Conservation Bylaw 2018 No. 5321. Once the larvae population is controlled, nematodes will begin to die due to a lack of available hosts and drying out of the treated area with reduced watering.

The proposed Township of Langley Drinking Water Conservation Bylaw 2018 No. 5321 Amendment Bylaw 2021 No. 5716 incorporates language to allow issuance of Water Exemption Permits to a property owner who wishes to treat their lawn with nematodes to control the Beetle. Proof of nematode purchase or hiring for professional treatment will be required for issuance of a Water Exemption Permit for this reason.

**Environmental Implications:**

Using nematodes as a biological control for the Beetle has proven to be an effective and environmentally sensitive way to treat infestations as no chemicals are used. Applied nematodes begin to die as the number of available host larvae dwindles and the application area is allowed to dry out with reduced watering.

Respectfully submitted,

Christopher Combe  
SUSTAINABILITY PROGRAM SPECIALIST  
for  
ENGINEERING DIVISION

**THE CORPORATION OF THE TOWNSHIP OF LANGLEY**  
**DRINKING WATER CONSERVATION BYLAW 2018 NO. 5321**  
**AMENDMENT BYLAW 2021 NO 5716**

**EXPLANATORY NOTE**

Bylaw 2021 No. 5716 amends Drinking Water Conservation Bylaw 2018 No. 5321 by including provisions for water restriction exemption permits related to the application of nematodes to combat the European Chafer Beetle.

**THE CORPORATION OF THE TOWNSHIP OF LANGLEY**

**DRINKING WATER CONSERVATION BYLAW 2018 NO. 5321**

**AMENDMENT BYLAW 2021 NO 5716**

The Municipal Council of the Corporation of the Township of Langley, in Open Meeting Assembled, ENACTS AS FOLLOWS:

1. This Bylaw may be cited for all purposes as "Drinking Water Conservation Bylaw No. 5321 Amendment Bylaw 2021 No 5716".
2. The "Drinking Water Conservation Bylaw 2018 No. 5321" as amended is further amended by:
  - a) Amending Section 2 Definitions, by inserting the following definition alphabetically:
 

‘EUROPEAN CHAFER BEETLE means an invasive insect pest whose larvae feed on the roots of grasses. The European Chafer Beetle larvae can be treated naturally using nematodes, which typically require a moist lawn for a period of 2 to 3 weeks from the day of application.’
  - b) In Section 7.2, by replacing the words ‘in the amount of Thirty (\$30.00) Dollars for Residential properties and One Hundred and Fifty (\$150.00) Dollars for Non-Residential properties, which includes commercial, mixed use, and multi-family Residential properties.’ with the words ‘, as outlined in Township of Langley Fees and Charges Bylaw 4616, as amended or replaced from time to time.’
  - c) Adding a new clause 7.3 as follows:
 

7.3 A Person who wishes to treat their lawn with nematodes in order to control the European Chafer Beetle may apply to the General Manager of Engineering for a Permit, with no associated application fee, authorizing the Person to water the nematode treatment area when Stage 1 Restrictions or Stage 2 Restrictions are in force, at times specified in the Permit, at the premises described in the permit. A Permit does not exempt the holder from Stage 3 Restrictions or Stage 4 Restrictions; however, should a Person hold a valid permit prior to Stage 3 Restrictions, the permit will remain valid until the expiry date indicated.
  - d) Adding a new clause 7.4 as follows:
 

7.4 A permit application for the application of nematodes must include, at time of submission, proof of:

    - a. purchase of nematodes; or
    - b. hiring of professional nematode application services.

e) Adding a new clause 7.5 as follows:

7.5 The General Manager of Engineering, upon being satisfied that an applicant qualifies under section 7.3 and 7.4, shall issue a Permit to the applicant.

f) Renumbering of subsequent clauses in Section 7 to follow 7.5

g) In renumbered section 7.6, replacing the words 'Section 7.2' with the words 'Section 7'.

h) In renumbered section 7.7, replacing the words 'Section 7.2' with the words 'Section 7'.

i) By adding a new clause 7.8 as follows:

7.8 No new Permits shall be issued under Stage 3 or Stage 4 Restrictions

j) By adding a new clause 7.9 as follows:

7.9 No valid permit shall carry forward should Stage 4 Restrictions be declared

k) By amending clause 8.1 by adding the words ', issued through Section 7.2,' after the words 'A Person may apply for one (1) extension of the Permit'.

l) By replacing clause 8.2 in its entirety with the following:

8.2 A Permit shall not be extended when:

- a. the Permit has been issued for nematode application through Section 7.5; or
- b. Stage 3 Restrictions or Stage 4 Restrictions are in effect.

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|------------------------|--------|--------|
| READ A FIRST TIME the  | day of | , 2021 |
| READ A SECOND TIME the | day of | , 2021 |
| READ A THIRD TIME the  | day of | , 2021 |
| ADOPTED the            | day of | , 2021 |

\_\_\_\_\_ Mayor \_\_\_\_\_ Township Clerk