

COMMITTEE OF THE WHOLE – APRIL 30, 2013

SOIL AMENDMENT TRIALS

Recommendation

The Commissioner of Strategic and Corporate Services in consultation with the Director of Parks and Forestry Operations as well as the Manager of Environmental Sustainability recommend:

1. That the City of Vaughan partner with York Region Environmental Alliance (YREA) to trial the soil amendment, biochar, at a local community garden and selected streetscape locations.

Contribution to Sustainability

This report is consistent with the priorities previously set by Council in the *Green Directions Vaughan*, Community Sustainability Environmental Master Plan:

- Goal 5, Objective 5.2: To continue the City's role in advocacy and information sharing on environmental issues; and
- Goal 2, Objective 2.2: To develop Vaughan as a City with maximum greenspace and an urban forum that supports our expected population growth.

The City of Vaughan recognizes the principles of sustainability must be incorporated into our activities. Community gardens and urban forests have obvious environmental benefits in a community but the social benefits that result from their presence cannot be overlooked. Piloting the use of a soil amendment such as biochar improves these areas of the community while demonstrating our willingness to partner in leading, innovative practices.

Economic Impact

Existing staff time would be utilized to assist with the test site selection process and a small amount of administrative tasks that could be potentially associated with this initiative. York Region Environmental Alliance and its partners, Ontario Ministry of Food, Agriculture and Rural Affairs (OMAFRA) and University of Guelph, would be responsible for all aspects of the trials including providing the biochar, coordinating the trials, monitoring and reporting.

Communications Plan

A separate communications plan is not required at this time. We would request that any reference by YREA and its project partners to the City of Vaughan biochar trials be vetted by key staff in the Environmental Sustainability Office, Parks and Forestry Operations as well as the Corporate Communications department prior to being made available to the public.

Purpose

The purpose of this report is to obtain Committee approval to participate in a trial of the soil supplement, biochar, at a local community garden and a selected streetscape locations.

Background - Analysis and Options

York Region Environmental Alliance (YREA), a local non-profit environmental organization, is working on a partnership venture to explore the economic, social and environmental viability of establishing local hemp industries. YREA objectives include establishing and participating in a local green economy by introducing and raising awareness of the benefits of industrial hemp farming to farmers and other stakeholders in York Region and surrounding areas.

YREA has confirmed that a Vaughan based farmer will be producing hemp in the upcoming growing season. One of the by-products of the industrial hemp production process is biochar. Hemp stalks can be converted into biochar, a carbon sequestering energy source for soil regeneration. Biochar, a soil amendment which mitigates green house gas emissions, reduces

the need for fertilizers, pesticides & water and restores soils to a dynamic, healthy state. Although biochar as a soil amendment has been proven worldwide, YREA will be conducting two year field trials in partnership with Ontario Ministry of Food, Agriculture and Rural Affairs (OMAFRA) and University of Guelph on Ontario soils using agricultural and urban forest test plots. YREA has approached the City of Vaughan to host some of the trials, expected to commence during the 2013 growing season, at a local community garden and an area within the urban forest

Options

Key Vaughan staff would work with YREA to identify a suitable site to test biochar on its urban agriculture (community gardens) and urban trees. In terms of potential community garden sites, both the community gardens at Fire Hall 7-1 and Sugarbush could be utilized. Soil analysis which was completed prior to initiating the Fire Hall 7-1 garden may be beneficial to determining the effect of the soil amendment. For urban forest locations various streetscape tree test plots could be explored. With replanting beginning to occur in the hardest hit Emerald Ash Borer (EAB) locations, it may be worthwhile to determine the effects of treated with biochar and non-treated planting sites. Another consideration that may determine the location of the urban tree test plots is the ability to include biochar in any contracted service agreements.

Relationship to Vaughan Vision 2020/Strategic Plan

This report is consistent with the Vaughan Vision 20/20 strategic goal of providing service excellence to citizens and the strategic objective to lead and promote environmental sustainability. This report is consistent with the priorities previously set by Council and the necessary resources have been allocated and approved.

Regional Implications

The trial has the potential to be expanded across York Region given that the main proponent, YREA, is based in this geographic area. YREA is expecting to secure support from the Forestry division of the Region's Environmental Services Department. The project will raise awareness of the importance of urban agriculture and urban forests which continue to be prevalent across York Region.

Conclusion

Participation in the soil amendment trial with York Region Environmental Alliance (YREA) at a local community garden and selected urban forest locations within Vaughan, is an excellent way to show support for an innovative project that contributes to sustainability. Biochar, the soil amendment, is a by-product of industrial hemp production which has been touted as high yield, low environmental impact crop. Trials in other countries have determined that biochar significantly improves soil quality and contributes to enhanced plant tree growth, tree health and ability to resist insects and disease.

Attachments

N/A

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Respectfully submitted,

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