TO: Community Services Committee

SUBJECT: Bronte Creek Rehabilitation Works in Lowville Park Update

Report Number: E-77-10    File Number(s): 805-13
Report Date: October 22, 2010    Ward(s) Affected: 1 □ 2 □ 3 4 □ 5 □ 6 □ All □
Date to Committee: November 24, 2010    Date to Council: December 1, 2010

Recommendation: DIRECT staff to continue working with Trout Unlimited Canada for the construction of the Bronte Creek Rehabilitation project in Lowville Park; and

THAT Council approve the removal of 25 trees in Lowville Park as a component of the proposed Bronte Creek Rehabilitation works.

Purpose: ☒ Address goal, action or initiative in strategic plan
☐ Establish new or revised policy or service standard
☐ Respond to legislation
☐ Respond to staff direction
☒ Address other area of responsibility

Reference to Strategic Plan: Burlington’s Strategic Plan 2007-2010 – Future Focus Seven promotes environmental stewardship initiatives. Trout Unlimited a not-for-profit conservation organization, has partnered with the City and Conservation Halton to improve the health of the Bronte Creek system in and around Lowville Park. This rehabilitation project supports Strategic Actions 5.3, 5.5 and 5.6.

Executive Summary: None

Background: Community Development Committee report E81/08 was approved by Committee on October 27, 2008 and Council on November 10, 2008. The following recommendation were approved:

THAT staff be directed to partner with Trout Unlimited and Conservation Halton to undertake watershed renewal and stream restoration works within Lowville Park; and
THAT staff be directed to partner with Trout Unlimited and Conservation Halton to promote environmental stewardship initiatives within the Bronte Creek watershed; and

THAT the Mayor and City Clerk be authorized to enter into any required agreements associated with the Bronte Creek Watershed renewal initiative to the satisfaction of the City Solicitor and the City Treasurer; and

THAT staff be directed to consider for inclusion in the 2009 Capital Budget and Forecast, tax supported funding from the Stormwater Management asset category, to facilitate the Bronte Creek Watershed renewal initiative.

**Discussion:**

Trout Unlimited Canada is planning a rehabilitation project of Bronte Creek in Lowville Park to enhance the ecosystem. See E-77-10 Appendix A. Main objectives of this project include the rehabilitation of the creek to a healthier state with increased aquatic and streamside habitats. Work on Bronte Creek is focused upon improving water quality, increasing coldwater ecosystem biodiversity, reducing water temperatures and creating more stable streamside zones.

Trout Unlimited has retained Burnside to design the Bronte Creek rehabilitation works in Lowville Park. The proposed works are to be approved by the Niagara Escarpment Commission, Conservation Halton and the City’s Engineering and Parks and Recreation Departments.

Trout Unlimited will be retaining a contractor to construct the proposed works. R & M Construction has estimated the construction cost of $233,000.

The proposed construction design has been reviewed by City staff. Parks and Recreation have reviewed the construction design to ensure the proposed works do not impact the park’s events and functionality. Roads and Parks Maintenance, including the City Forester, have reviewed the design impacts to the trees and park’s events and maintenance requirements. The Engineering Department has reviewed the creek works.

Trout Unlimited has applied to the Niagara Escarpment Commission, Ministry of Natural Resources, Transport Canada and Conservation Halton for the required permits.

Trout Unlimited has been successful in obtaining funds for the construction of this project. To date, $155,000 has been obtained, in addition to the $100,000 that the City of Burlington allocated to the project through the 2009 Capital Budget and Forecast.
Public Consultation
Trout Unlimited Canada recently held a well attended Public Information Centre for the Bronte Creek Rehabilitation project on Thursday, September 23, 2010 at the Lowville United Church. Twenty-five attended this public information centre.

Three comment sheets were returned to Trout Unlimited. In general, the comments received were requests for Trout Unlimited to visit their lands and provide input on potential improvement for their private property. They agreed that the Bronte Creek rehabilitation project was a good project and they would like to get involved with the project.

Options Considered
More extensive restoration works was one of the options considered. This alternative would have had major impacts to the environment and ecosystem. Due to the detrimental effects to the vegetation and aquatic system, this alternative was rejected.

Financial Matters:
The approved 2009 Capital Budget and Forecast identified $100,000 tax supported debt funding to facilitate the Bronte Creek Rehabilitation project.

To date, $3,100 was spent on a Trout Unlimited planting event with students from Appleby College in May 2009. 590 native plants re-vegetated areas along Bronte Creek that would not be impacted by the proposed creek rehabilitation works.

The remaining funds in this account will be contributed toward the approved construction works.

At this time, the City does not foresee any additional funding requirements.

Other Resource Impacts
Restoration of Bronte Creek in Lowville Park is a major component of Trout Unlimited Canada’s Bronte Creek Watershed Renewal Program. This program is in partnership with City of Burlington, Conservation Halton, Hamilton-Halton Watershed Stewardship Program and Trout Unlimited Canada’s Ted Knott Chapter and aims to protect the many beautiful portions of Bronte Creek while engaging local residents in restoring the aquatic ecosystem of this environmentally significant watershed. The restored section of Bronte Creek in Lowville Park will be used as a demonstration site, highlighting the components of a healthy ecosystem and engaging local residents to improve their sections of Bronte Creek.

In addition to the $100,000 identified from the City of Burlington, Trout Unlimited Canada has raised $155,000 for the Lowville Restoration Project from a variety of
sources including Environment Canada, TD Friends of the Environment Foundation, Canadian National Sportsmen’s Shows and Trout Unlimited Canada. Specifically,

- Lowville Rehabilitation Project was selected to receive $90,000 from the EcoAction Community Funding Program through Environment Canada. Media event held at Lowville Park on August 17, 2010.

- TD Friends of the Environment Foundation provided $25,000 that was presented at Bronte Creek Family Fun Day on June 12, 2010.

- The Canadian National Sportsmen’s Shows provided $20,000.

- Trout Unlimited Canada’s Coldwater Conservation Fund provided $20,000 in funding.

**Environmental Matters:**

Trout Unlimited have advised that an historic air photo review has indicated that Bronte Creek through portions of Lowville park has widened substantially over long periods, degrading overall environmental health. The proposed project plan will improve the overall environmental health of Bronte Creek in Lowville Park.

The proposed project involves rebuilding some of the banks that have been lost through historic erosion by installing brush mattresses in the banks of Bronte Creek. The brush mattress will address erosion and deter the potential erosion in the future and will trap sediment, rebuilding the banks. Brush mattresses are a continuous band of interlaced live branches that are placed on a bank face. The live branches are cut from any sprouting woody plant, such as willow and dogwood. The woody plant will sprout roots into the bank and the plant will grow along the bank edge. The rooted vegetation will help control erosion along the bank and will serve as habitat for birds, insects and small animals. It will also provide shade to the stream - lowering water temperatures, improve fish habitat and deter visitors from trampling the stream banks.

Three point bars will be created at existing creek bends. The existing slope at these bends will be cut back and re-vegetated. Point bars will slowly accumulate sediment deposits. These point bars are often flooded during rain events, slowing down the flow. It is anticipated that a total of 25 trees will be removed for the creation of the three point bars. The trees being removed consist of Willows, Eastern White Cedar and Norway Spruce.

Once the construction has been completed native plants will be used to re-vegetate the disturbed areas and other areas of Lowville Park. The re-vegetation will provide habitat for birds, insects and animals and will help support fish habitat by providing shade, cover, food and nutrients for fish. The vegetation will also help to maintain water quality and moderate flows and temperatures that are critical for healthy fish habitat and overall watershed health. The re-planting vegetation will consist of the following plants:
<table>
<thead>
<tr>
<th>Latin Name</th>
<th>Common Name</th>
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<tbody>
<tr>
<td>Sambucus canadensis</td>
<td>Black Elderberry</td>
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<tr>
<td>Virburnum lentago</td>
<td>Nannyberry</td>
</tr>
<tr>
<td>Viburnum tibulum</td>
<td>Highbush Cranberry</td>
</tr>
<tr>
<td>Alnus incana spp. Rugosa</td>
<td>Speckled Alder</td>
</tr>
<tr>
<td>Cornus stolonifera</td>
<td>Red-Osier Dogwood</td>
</tr>
<tr>
<td>Salix discolour</td>
<td>Pussy Willow</td>
</tr>
<tr>
<td>Rebus idaeus</td>
<td>Red Raspberry</td>
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<tr>
<td>Fagus grandifolia</td>
<td>American Beech</td>
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<tr>
<td>Betula papyrifera</td>
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<tr>
<td>fraxinus americana</td>
<td>White Ash</td>
</tr>
<tr>
<td>Prunus serotina</td>
<td>Black Cherry</td>
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<tr>
<td>Acer saccharum</td>
<td>Sugar Maple</td>
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In summary, a total, 25 trees will be removed and in excess of 500 plants will be used to re-vegetate the park.

Communication Matters:

Trout Unlimited has contacted the Bronte Creek landowners upstream and downstream of Lowville Park. The area landowners have been invited and have taken part in Trout Unlimited’s many events. The following successful events have been hosted by Trout Unlimited:

Bronte Creek Watershed Renewal Program Workshop Series at Various Locations on:
- July 29, 2009
- August 5, 2009
- August 12, 2009
- May 19, 2010
- November 20, 2010

Bronte Creek Family Fun Days in Lowville Park on:
- August 22, 2009
- June 12, 2010

Bronte Creek Workday in Lowville Park on:
- July 10, 2010
- August 7, 2010
- September 11, 2010

Once the project has received all of the required construction permits and the contractor has confirmed his availability, the area residents will receive a project construction confirmation letter. Subject to receiving the required permits, the project is expected to be constructed in winter 2011. The project will be posted on the City of Burlington
website for public access. The project will also be advertised in the Burlington Post. Following the construction of the project, Trout Unlimited will continue to work with the community, to provide public education that will help to ensure the long term success of the project.

Conclusion:
The City will continue to work with Trout Unlimited and Conservation Halton on the Bronte Creek Rehabilitation project in Lowville Park.

Respectfully submitted,

Teresa Giangregorio
Stormwater Technologist
(905) 335-7600 extension 7891

Appendices:
E-77-10 Appendix A

Notifications:
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Mark Covert (RPM)      covertm@burlington.ca

Approvals:  *required
*Department      City Treasurer   General Manager   City Manager

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<tr>
<th>Committee Disposition &amp; Comments</th>
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