

**ENVIRONMENT COMMITTEE**

*HIS WORSHIP, THE MAYOR  
AND COUNCILLORS*

**SUBJECT: REMOVAL AND CONTROL OF INVASIVE PLANTS IN SELECTED  
LOCATIONS IN BURNABY**

**RECOMMENDATIONS:**

1. THAT Invasive Plant Council of BC's Hot Spots program, as outlined in this report, be approved for implementation at Taylor Park and Deer Lake Park.
2. THAT a copy of this report be forwarded to the Parks, Recreation and Culture Commission for information.
3. THAT a copy of this report be sent to Invasive Plant Council of BC.

**REPORT**

The Environment Committee, at its meeting held on 2010 May 11, received and adopted the attached report seeking Council's approval for implementation of Invasive Plant Council of BC's Hot Spots program.

Invasive plants are a growing issue affecting all aspects of the environment and across many boundaries and jurisdictions. Through the City of Burnaby's Invasive Plant Study, seven pilot sites were identified for future removal program. Two of the seven sites were selected as candidates for the IPCBC Hot Spots program.

Respectfully submitted,

Councillor Dan Johnston  
Chair

Councillor Sav Dhaliwal  
Vice Chair

Councillor Anne Kang  
Member

**TO:** CHAIR AND MEMBERS  
ENVIRONMENT COMMITTEE

**DATE:** 2010 April 29

**FROM:** DIRECTOR PARKS, RECREATION &  
CULTURAL SERVICES

**SUBJECT:** REMOVAL AND CONTROL OF INVASIVE PLANTS IN SELECTED  
LOCATIONS IN BURNABY

**PURPOSE:** To request approval for implementation of Invasive Plant Council of BC's Hot Spots program.

---

#### **RECOMMENDATIONS:**

1. **THAT** Invasive Plant Council of BC's Hot Spots programs, as outlined in this report, be approved for implementation at Taylor Park and Deer Lake Park.
2. **THAT** a copy of this report be forwarded to the Parks, Recreation and Culture Commission for information.
3. **THAT** a copy of this report be sent to Invasive Plant Council of BC.

#### **REPORT**

The City of Burnaby has been selected to receive assistance with the removal of invasive plants through the Invasive Plant Council of BC's Hot Spots Program. This report provides background on the various organizations collaborating on invasive plant issues and outlines the Hot Spots Program that has been developed by the Invasive Plant Council of BC. Pending approval by the Environment Committee and Council, the program crew will be working in collaboration with Parks Staff on two sites removing and controlling invasive plants in the spring 2010.

#### **BACKGROUND ON PARTNERS**

The Invasive Plant Council of BC (IPCBC) is a registered, non-profit charity. The IPCBC works to "stop the spread" of invasive plants minimizing the negative ecological, social, and economic impacts caused by the introduction, establishment, and spread of invasive plants. They do this through workshops, activities, and events to educate the public and professionals about invasive plants and their potential risks.

To: *Environment Committee*  
From: *Director Parks, Recreation & Cultural Services*  
Re: *REMOVAL AND CONTROL OF INVASIVE PLANTS*  
*IN SELECTED LOCATIONS IN BURNABY*  
2010 April 29..... Page 2

In British Columbia, there are also independent Regional Invasive Plant Committees located across the province that work on invasive plant management in a variety of capacities. The Greater Vancouver Invasive Plant Council (GVIPC) is the regional committee for the Metro Vancouver area. The GVIPC works to improve management of invasive plants through stakeholder collaboration, collecting, compiling and disseminating information, and undertaking education and outreach activities. The GVIPC is recognized as the local expert on invasive plants.

## **THE IPCBC HOT SPOTS PROGRAM**

The IPCBC has worked with regional committees throughout B.C. to conduct inventory and develop treatment programs of invasive plants. Recognizing that both inventories and treatment prescription provide valuable information for all partners, the IPCBC created a “Hot Spot” program to further the goals of:

- Determining which invasive plants are present in the areas of interest, and where they are (or are not), including size and abundance.
- Developing a better understanding of how populations are spreading, and help investigate vectors for dispersal.
- Supporting the efforts of partners to prioritize management activities and inform strategies for prevention and treatment.

The City of Burnaby participated in this program in 2009, by identifying areas along various creeks for invasive plant inventory. The survey information was entered into the Invasive Alien Plant Program (IAPP) Application, the database for invasive plant data in BC, managed by the Ministry of Forest and Ranges.

The GVIPC was invited to participate in this “Hot Spots” project starting January 2010. The IPCBC hired 4 field crew members, plus a technical support office worker to support the crews by preparing maps, entering crew data and working with regional stakeholders to acquire additional invasive plant mapping data.

In Greater Vancouver the work focused on collecting an inventory of invasive plants in municipal parks, regional parks and other green spaces as determined by the land management partners.

In the spring 2010 Program, the Hot Spots crew will once again be working in the Metro Vancouver area, focusing on manual removal and control of invasive plants. Having identified key location where invasive plant management would be maintained and monitored over a sustained period of time, the City of Burnaby was once again selected as an eligible municipality to receive assistance through the IPCBC Program.

To: *Environment Committee*  
From: *Director Parks, Recreation & Cultural Services*  
Re: *REMOVAL AND CONTROL OF INVASIVE PLANTS*  
*IN SELECTED LOCATIONS IN BURNABY*  
2010 April 29..... Page 3

## **CITY OF BURNABY INVASIVE PLANT STUDY**

The City of Burnaby undertook an invasive plant study in 2009. The study surveyed all parks and green space to establish a baseline for invasive plant species abundance and distribution, produced a GIS location map of priority species, and outlined the magnitude of the invasive plant issue. Based on the findings of the survey, the study recommended pilot projects for initial consideration in an invasive plant removal program. The pilot projects included work at Taylor Park and Deer Lake Park, both of which were put forward to the GVIPC as potential worksites for the Hot Spots Crew. Both are active, high profile locations supported with resources for future maintenance of any work completed by the Hot Spots Crew.

The Metro Vancouver Hot Spots Crew proposes to work in Burnaby Parks for 2 weeks sometime between May to September 2010; workplans and scheduling for the Crew's time in Metro Vancouver municipalities have yet to be confirmed, pending Committee and Council approval.

The work on each site will be determined by the City, and managed by the GVIPC. The work completed by the Hot Spots program will be limited to manual removal and control of invasive plants, additional machinery work will be supplemented by the City, along with any required restoration plantings in the removal sites.

The following information describes the two sites proposed and outlines the scale of information and proposed treatment plan:

### **1.1 Taylor Park**

This is a newly developed park on an old landfill site covering 22.46 acres. Taylor Park was found to be covered by 0.62 acres or 3% of invasive plants. The long-term goal is to rehabilitate this area so it supports a natural plant community. The first priority for removal is knotweed and scotch broom; second priority is blackberry, periwinkle and butterfly bush.

Due to the resistant nature of knotweed to manual removal techniques, chemical treatment is the recommended 'industry' standard for treatment. However, this year the knotweed will be removed manually. It is estimated this project will require 150 manual hours of work at an estimated value of \$27,300.

Extensive plant community restoration treatments are also prescribed. Since soils are poor and may be compacted, planting dense stands of alder have been recommended for rehabilitating the site. Once pioneer alder stands have established, these plant communities will be enhanced by the addition of conifers along with other native species.

The timing of removal will be late winter/spring (summer is also acceptable for all species except scotch broom and butterfly bush which go to seed later in the summer).

To: Environment Committee  
 From: Director Parks, Recreation & Cultural Services  
 Re: REMOVAL AND CONTROL OF INVASIVE PLANTS  
 IN SELECTED LOCATIONS IN BURNABY  
 2010 April 29..... Page 4

Figure 1. Taylor Park

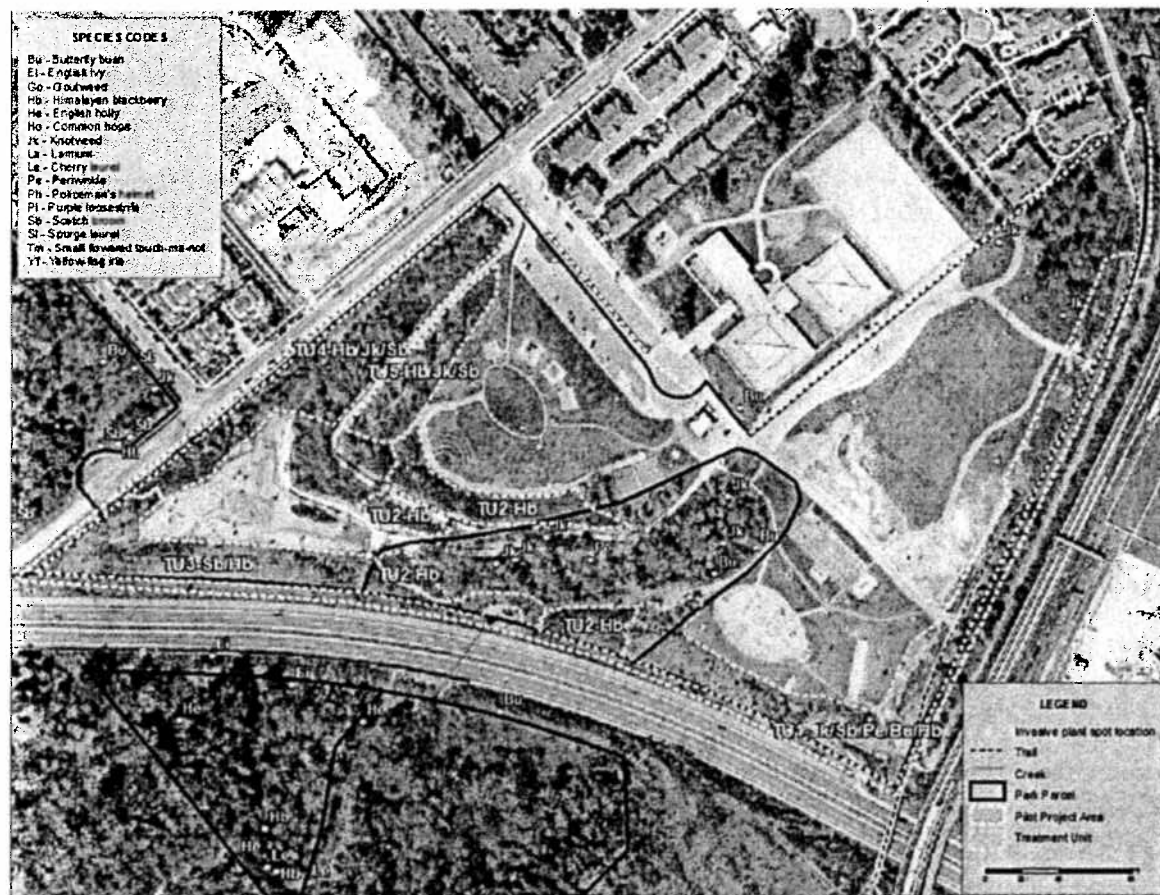


Table 1. Prescription by species: Taylor Park

Priority	Species	Approximate Size of Infestation (m <sup>2</sup> )	Infestation Status	Removal Method
1	Knotweed	3941	Moderate sized patches scattered throughout park	ERADICATE: Hand removal
1	Scotch broom	3964	Large contiguous patches scattered throughout non-mowed areas	ERADICATE: Hand removal; pull small plants; cut large stems to base
2	Himalayan blackberry	20,989	Large contiguous patches scattered throughout non-mowed areas	CONTAIN: Cut or mow new growth spreading to grass areas; flail mow monoculture patches with no tree cover
2	Periwinkle	305	Two moderate sized patches	ERADICATE: Hand removal (including roots)
2	Butterfly bush	107	Small individual specimen scattered throughout site, mostly concentrated in southeast corner	ERADICATE: Hand removal (including roots)

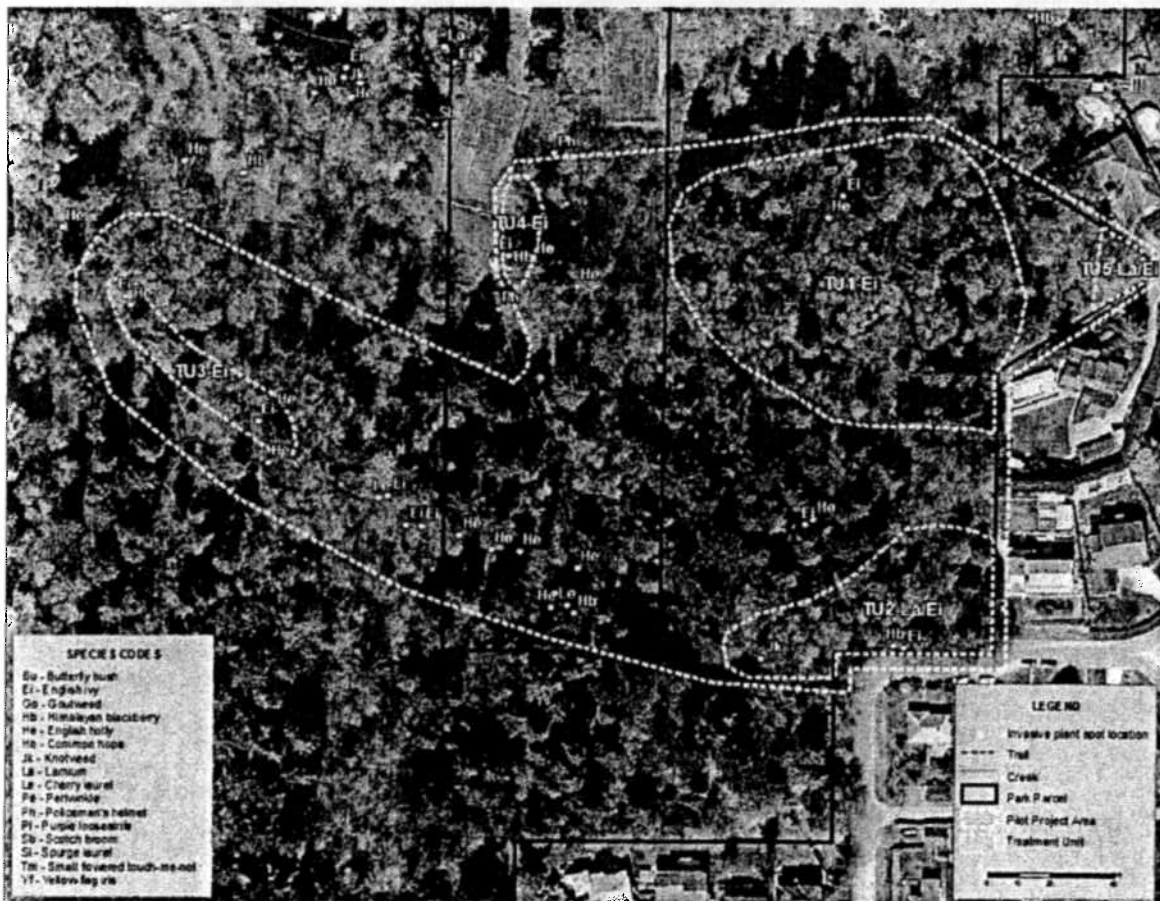
## 1.2 Deer Lake Park: Southeast edge

Description: This is an edge infestation threatening a natural stand with high ecological value (young to mature seral stage mixed species). The first priority is the removal of English ivy and Lamium; the second priority is the removal of English holly and cherry laurel.

The size of this infestation covers 0.93 acres. It is estimated 28 hours of manual labour will be required, having an estimated worth of \$ 6,100.

The time frame for removal has no restrictions for ivy, English holly or cherry laurel, however, they are easiest to identify in the winter and early spring. Due to the resistant nature of Lamium to manual removal techniques, chemical treatment is the recommended 'industry' standard for treatment. However, for this year lamium will be removed manually rather than chemically. It is estimated this project will require 28 manual hours of work, estimated at \$6,100.

Figure 2. Deer Lake Park southeast edge.



To: Environment Committee  
 From: Director Parks, Recreation & Cultural Services  
 Re: REMOVAL AND CONTROL OF INVASIVE PLANTS  
 IN SELECTED LOCATIONS IN BURNABY  
 2010 April 29..... Page 6

Table 2. Prescription by species: Deer Lake Park southeast edge.

Priority	Species	Approximate Size of Infestation (m <sup>2</sup> )	Infestation Status	Removal Method
1	English ivy	1900	Scattered patches encroaching on native mixed forest; vines climbing tree stems; attempt to eradicate infestation	ERADICATE: Hand removal of all patches; cut vines at 1.5m on tree stems
1	Lamium	1851	Test area chemical removal and sheet mulching	ERADICATE: Test plot 1 everywhere >15m from streams slope: chemical removal; Test plot 2 within 15m of streams: sheet mulch with newspaper or cardboard, cover in 20 cm of deciduous wood chips, restoration planting
2	English holly		Scattered, low abundance; inventory not exhaustive	PASSIVE CONTAINMENT: Hand removal of small plants (small enough that roots can be pulled)
2	Cherry laurel		Scattered, low abundance; inventory not exhaustive	PASSIVE CONTAINMENT: Hand removal of small plants (small enough that roots can be pulled)

## SUMMARY

Invasive plants are a growing issue affecting all aspects of the 'environment' and across many boundaries and jurisdictions. As such, three organizations have come together in partnership to address/study the invasive plant issues in the Province and City of Burnaby. The Invasive Plant Council of BC contributes, provides/links/inputs to the National Invasive Plant Council, looking at nationwide issues while providing a provincial framework. The Greater Vancouver Invasive Plant Council provides a regional perspective/expertise and works directly with the City of Burnaby. The City's Invasive Plant study provides a specific review of the conditions in Burnaby parks and green space.

In working together, the provincial organization provides resources for local level initiatives, recognizing each region has specific issues. Information on the invasive plant species, spread and removal techniques has been exchanged with partner organizations.

Through the City of Burnaby's Invasive Plant Study, seven pilot sites were identified for future removal program. Two of the seven sites were selected as candidates for the IPCBC Hot Spots Program. Pending approval of participation in the program, staff will work with the IPCBC to carry out the approved work.

To: *Environment Committee*  
From: *Director Parks, Recreation & Cultural Services*  
Re: *REMOVAL AND CONTROL OF INVASIVE PLANTS*  
*IN SELECTED LOCATIONS IN BURNABY*  
2010 April 29..... Page 7



Dave Ellenwood  
DIRECTOR PARKS, RECREATION & CULTURAL SERVICES

HE:tc

p:\admin\tc\he\reports\removal and control of invasive plants in selected locations

Copied to: City Manager