



ENVIRONMENT COMMITTEE

NOTICE OF OPEN MEETING

DATE: TUESDAY, 2015 OCTOBER 13

TIME: 6:00 PM

PLACE: Council Committee Room, Main Floor, City Hall

A G E N D A

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1. <u>CALL TO ORDER</u>	
2. <u>MINUTES</u>	
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a) Correspondence from Jerry Muir, Community Relations Manager, BC Hydro Re: 2015 BC Hydro Community Champions Program	7
4. <u>REPORTS</u>	
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6. <u>INQUIRIES</u>	
7. <u>ADJOURNMENT</u>	



ENVIRONMENT COMMITTEE MINUTES

Tuesday, 2015 June 09

An 'Open' meeting of the Environment Committee was held in the Council Committee Room, Main Floor, City Hall, 4949 Canada Way, Burnaby, B.C. on Tuesday, 2015 June 09 at 6:00 PM.

1. CALL TO ORDER

PRESENT: Councillor Anne Kang, Chair
Councillor Sav Dhaliwal, Vice Chair
Councillor Pietro Calendino, Member
Mr. Peter Cech, Citizen Representative
Mr. Frank Zhao, Citizen Representative

ABSENT: Mr. Bill Brassington Jr., Citizen Representative
Ms. Peggy Hua, Citizen Representative

GUEST: Councillor James Wang

STAFF: Mr. Dipak Dattani, Deputy Director Engineering
Ms. Lee-Ann Garnett, Assistant Director Long Range Planning
Ms. Gisele Caron, Purchasing Manager
Ms. Heather Edwards, Manager Parks Planning & Design
Ms. Lise Townsend, Eco System Planner
Mr. Mark Sloat, Planner 1
Ms. Blanka Zeinabova, Administrative Officer

The Chair called the Open meeting to order at 6:03 p.m.

2. MINUTES

a) Open meeting of the Environment Committee held on 2015 April 14

MOVED BY MR. P. CECH

SECONDED BY COUNCILLOR P. CALENDINO

THAT the minutes of the 'Open' meeting of the Environment Committee held on 2015 April 14 be adopted.

CARRIED UNANIMOUSLY

3. **DELEGATIONS**

MOVED BY COUNCILLOR S. DHALIWAL
SECONDED BY MR. F. ZHAO

THAT the delegations be heard.

CARRIED UNANIMOUSLY

- a) **Matt Hulse, Our Horizon**
Re: Climate Change Initiative
Speaker: Matt Hulse, BC Campaign Director

The delegation was not present.

- b) **Jerry Huang**
Re: Burnaby's Living Environment
Speaker: Jerry Huang

Mr. Jerry Huang, Burnaby resident appeared before the Committee presenting ideas and suggestions on improving Burnaby's living environment, protecting trees, as well as earthquake and emergency preparation in neighbourhoods that are included in the City's plan as 'Multiple Family Residential'.

4. **CORRESPONDENCE**

MOVED BY COUNCILLOR P. CALENDINO
SECONDED BY MR. P. GECH

THAT the correspondence be received.

CARRIED UNANIMOUSLY

- a) **Memorandum from the City Clerk**
Re: Oil Spill in English Bay, Vancouver - MV Marathassa

A memorandum was received from the City Clerk advising that Council, at the Open Council meeting held on 2015 April 27, received and adopted the above noted report providing information on the recent oil spill in English Bay from MV Marathassa and on potential implications to Burnaby for any similar occurrences within Burrard Inlet in the future.

Councillor Dhaliwal conveyed thanks to staff for their great work and noted that an emergency resolution calling for a better emergency response plan for oil spill situations in the Vancouver harbor was presented and passed at the Federation of Canadian Municipalities meeting in Edmonton.

b) Memorandum from City Clerk
Re: European Chafer

A memorandum was received from the City Clerk advising that Council, at the Open Council meeting held on 2015 May 25, received and adopted the above noted report seeking approval on the proposed 2015 European Chafer Management Plan.

Staff provided an overview of the European Chafer Management Plan noting that sale of nematodes will be held at Bill Copeland Arena from June 17 to June 24 (while supplies last); and pick up of nematodes will be held at Still Creek Works Yard.

Arising from discussion, the Committee requested an update on the sale event at the September meeting.

c) Memorandum from the Deputy City Clerk
Re: 2015 Environmental Awards Program

A memorandum was received from the City Clerk advising that Council, at the Open Council meeting held on 2015 June 01, received and adopted the above noted report recommending recipients of the 2015 City of Burnaby Environmental Awards Program.

Councillor Kang thanked the Committee members for work well done and reminded that an award ceremony will be held on Sunday, 2015 June 14 from 1:30 p.m. to 3:30 p.m. at the Rowing Pavilion, Burnaby Lake.

d) Memorandum from the Director Finance
Re: City Green Team Food Recovery Activities

A memorandum was received from the Director Finance providing information on food recovery pilot program undertaken by the Burnaby Green Team in partnership with the City's Food Services Division.

Staff advised that the food recovery pilot is being completed through participation in the Greater Vancouver Food Bank Society's 'Community Angels' Food Runners Program. The program facilitates donation of food to local meal providing agencies. The pilot will run until the end of 2015 and a full report on the outcomes will be forwarded to the Committee.

5. **REPORTS**

MOVED BY COUNCILLOR P. CALENDINO
SECONDED BY MR. P. CECH

THAT the reports be received.

CARRIED UNANIMOUSLY

a) **Report from the Director Planning and Building** **Re: World Rivers Day 2015**

The Director Planning and Building submitted a report seeking approval of the program for World Rivers Day 2015 at the Burnaby Village Museum and expenditure authorization for advertising, promotion and support of the program.

The Director Planning and Building recommended:

1. THAT Council approve the program for World Rivers Day 2015 at the Burnaby Village Museum.
2. THAT Council authorize expenditures for World Rivers Day 2015 in the amount of \$4,000 for advertising, promotion and programming, as outlined in this report.
3. THAT a copy of this report be forwarded to the Burnaby Parks, Recreation and Culture Commission; Mark Angelo, World Rivers Day Chair and Founder and representative of the International River Foundation; and the Outdoor Recreation Council of British Columbia for information purposes.

MOVED BY COUNCILLOR S. DHALIWAL
SECONDED BY MR. P. CECH

THAT the recommendations of the Director Planning and Building be adopted.

CARRIED UNANIMOUSLY

The Committee recommended staying within the event's proposed budget.

Councillor Calendino retired from the meeting at 7:46 p.m. and did not return.

b) **Report from the Director Engineering** **Re: Annual Drinking Water Quality Monitoring Report (2014)**

The Director Engineering submitted the City's Annual Drinking Water Quality Monitoring Report for 2014.

The Director Engineering recommended:

1. THAT Council receive this report for information.
2. THAT a copy of this report be forwarded to Dr. Lisa Mu, Medical Health Officer, Fraser Health Authority, Suite 400 - Central City Tower, 13450 - 102nd Avenue, Surrey, BC V3T 0H1.

MOVED BY COUNCILLOR S. DHALIWAL
SECONDED BY MR. F. ZHAO

THAT the recommendation of the Director Engineering be adopted.

CARRIED UNANIMOUSLY

Councillor Kang referred to water conservation tips on page 8 of the report, and suggested that the City use visual icons.

6. **NEW BUSINESS**

a) **Environment Week 2015 - Verbal Update**
Mark Sloat, Planner

Mr. Sloat, Planner provided an update on successful Environment Week 2015 noting that on Sunday, 2015 June 14 the award reception will be held at the Rowing Pavilion at Burnaby Lake.

Councillor Kang conveyed thanks to staff for a successful event, and suggested to seek more recyclables for 'electrocycle', and further to connect questions to the topics at the kiosks next year.

7. **INQUIRIES**

There were no inquiries brought before the Committee at this time.

8. **ADJOURNMENT**

MOVED BY COUNCILLOR S. DHALIWAL
SECONDED BY MR. P. CECH

THAT this Open Committee meeting do now adjourn.

CARRIED UNANIMOUSLY

The Open meeting adjourned at 8:07 p.m.

Blanka Zeinabova
ADMINISTRATIVE OFFICER

Councillor Anne Kang
CHAIR

DRAFT

Ibrahim, Sabreena

SECTION 2 COUNCIL CORRESPONDENCE

From: Wong, Elaine
Sent: August-27-15 8:22 AM
To: Clerks
Subject: FW: 2015 BC Hydro Community Champions Program

City Manager
 Deputy City Managers (2)
 Dir. Engineering
 Dir. Finance
 Dir. Planning & Building
 Dir. Parks, Rec & Cul. Services
 Environment Committee

From: Muir, Jerry[SMTP:JERRY.MUIR@BCHYDRO.COM]
Sent: Wednesday, August 26, 2015 10:06:33 AM
To: Mayor
Cc: Moncur, Bob; Higginbottom, Steve; Waddell, Lisa
Subject: 2015 BC Hydro Community Champions Program
Auto forwarded by a Rule

August 26, 2015

Mayor Derek Corrigan
 4949 Canada Way
 Burnaby, BC
 V5G 1M2

Dear Mayor Corrigan and Council:

On August 18th, BC Hydro launched the 2015 edition of our Community Champions Program.

BC Hydro is looking for non-profit organizations from across BC to submit video entries that tell us what they are doing to make their community more sustainable. Videos will be accepted until September 30th.

Up to 15 finalists will be selected for public voting between October 15th and November 30th. Results of the public voting will determine the five winners, each of which will receive \$10,000 to continue their sustainability-based project. The five winners will be announced on December 15, 2015.

If you are aware of any non-profit groups within your community that would be interested in this opportunity, please encourage them to participate.

We also encourage all participants to share the story of their conservation initiative or show support for their favourite non-profit on social media using the hashtag #BCHCommunityChampions.

For more information on the Community Champions Program, please visit:
www.bchydro.com/communitychampions

Regards,



BChydro 

Jerry Muir
 Community Relations Manager
 Lower Mainland
 Office: 604 623-3986
 Email: Jerry.Muir@bchydro.com



Meeting 2015 September 08

COMMITTEE REPORT

TO: CHAIR AND MEMBERS
ENVIRONMENT COMMITTEE

DATE: 2015 August 31

FROM: DIRECTOR PARKS, RECREATION &
CULTURAL SERVICES

SUBJECT: UPDATE ON THE BURNABY INVASIVE PLANT MANAGEMENT IN
PARKS

PURPOSE: To request Council authorization to proceed with the Invasive Plant Management work plan in Burnaby parks.

RECOMMENDATIONS:

1. **THAT** Council authorize staff to proceed with the proposed 2015/2016 work plan, as outlined in this report.
2. **THAT** a copy of this report be sent to the Parks, Recreation and Culture Commission for information.

REPORT**BACKGROUND**

Invasive Plant Management in Burnaby Parks began in 2009 with an Invasive Plant Survey, and Habitat Management Strategy. The survey focussed specifically on the top 21 invasive plant species at that time (Table 1), and provided a 'snap shot' on the status of invasive plants in Burnaby parks, along with recommendations for treatment options. Of the 1,786 ha. of Park lands, approximately 1,484 ha. were surveyed, 302 ha. were inaccessible and not surveyed (Burnaby Mountain terrain and golf courses). Approximately 284 ha. or 19% of the total area surveyed were impacted by invasive species (Table 2).

The survey identified and prioritized key species and locations to manage. As invasive plants are living, growing and effected by the year's climate, management strategies are refined annually accordingly. Due to the scale of infestation and the associated cost, not all species can be treated. It was identified early on in the process, that the goal was to *control the spread* of invasive species beyond their current areas, recognizing total eradication is unlikely for any one species.

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Management initiatives included a holistic approach including *manual* removal/maintenance, community and City Staff education and awareness raising, community participation programs, and City Participation in regional initiatives.

Since 2009, new information about removal/eradication techniques have developed, new species are becoming a concern, including invasive wildlife. Adaptive management with adjustment to treatment techniques from year to year has been a key to tackling this very large challenge.

2009-2014 ACTION PLAN:

INVASIVE PLANT MANAGEMENT IN TARGETED PARK

There are two streams of treatment for invasive plant control; first at specific parks and second through targeting specific invasive species.

As parks undergo capital development or redevelopment, invasive plants are removed during the process. The invasive plant removal process is reviewed to ensure effective removal, and the park is monitored and maintained to ensure the invasive plants are controlled. This approach has been used at Cameron Park, George McLean Park, Taylor Park, Jim Lorimer Park, and Warner Loat Park. Central Park and Deer Lake Park are larger parks where continued efforts are ongoing. In addition to opportunities to remove invasive plants during capital projects, volunteer work parties and special funding opportunities have provided resources to contribute to the removal and replanting program. See the attached table 3 for details on removal and control efforts in these parks. Treatment for all these parks will continue once or twice a year, depending on the need in that park.

INVASIVE PLANT MANAGEMENT THROUGH TARGETED SPECIES

Specific invasive plants are targeted based on the scale of infestation, the cost of removal, and the severity of environmental impact. There are two species that have been targeted for removal in all parks; Butterfly bush and Pickerelweed. These were identified in the 2009 invasive plant survey as existing in sufficiently low numbers to be eradicated in Burnaby Parks. Five additional species were targeted for removal/control of spread but not total eradication.

The following notes summarize progress on all of the targeted species:

- Butterfly bush – All plants were removed by fist clipping any flowers or seed heads, and then digging as much of the root mass as possible using hand tools. In 2014, a majority of sites showed no evidence of re-growth or new seedling. However new seedling or sprout from cut stumps were found growing in 14 of 44 previously treated sites, all occurring at Taylor Park and 14th Avenue Ravine Park. As the seed bank for this species is unknown, it is recommended that all sites be monitored for new seedling growth in 2015.

To: *Environment Committee*
 From: *Director Parks, Recreation & Cultural Services*
 Re: *Update on the Burnaby Invasive Plant Management in Parks*

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- Pickerelweed – Pickerelweed was first treated in 2010. The infestation at Deer Lake Park and Fraser Foreshore Park were relatively small. Pickerelweed was removed by hand, with care taken to remove as much of the root mass as possible. In 2014, only one site at Deer Lake showed re-growth. Seven sites have shown no-regrowth for 3 or more years. All sites at Burnaby Fraser Foreshore have had minor levels of plant regrowth. It is recommended all sites showing regrowth be monitored in 2015, and the monitoring at the seven Deer Lake sites which have no regrowth for 3 years be discontinued.
- Purple Loosestrife – Purple Loosestrife was targeted along the shores of Deer Lake. Eradication is likely impossible however, regular treatment to prevent the plant from taking over the entire shoreline of the lake is possible. The plant is removed by first clipping any flower or seed head, and then digging as much of the root mass as possible using hand tools. The total number of hours required to maintain the site and the plant mass removed each year has continued to decline. It is recommended to continue to monitor for re-growth in 2015.
- English ivy – English ivy is widespread through Burnaby parks. It is targeted for removal in sites where the growth is climbing tree trunks creating wind load and subsequent tree failure, causing potential hazard to park users. In the 2009 survey, 14 key parks were identified for ivy removal (see table 4), with a few sites targeted each year. All the hazardous English ivy has been treated. The program will continue to target English ivy growing in trees in less hazardous/safety related areas, and monitor all past treatment sites. Sites where ivy has been removed from trees will be revisited every 3 years to cut-back regrowth.
- Scotch broom – Scotch broom has been treated in Taylor Park, Central Park and Deer Lake Park. In 2014, sites in 36 other park sites were treated. Small to medium sized plants were pulled from the roots and larger plants were sawed off at the base of the plant, as close to the ground as possible. Monitoring and maintenance of these sites will be rigorous for the next 5 years to capture new growth from the seed bank or sprouting from old root stumps, following that monitoring and maintenance will proceed as required.
- English holly – English holly is a plant that is largely spread by birds that eat the berries and drop the seeds in its excrement. Individual holly plants are typically found in the middle of remote areas and then spread quickly through vegetative branches that spread across the ground. English holly is targeted for removal with assistance from volunteers. There has been an effort to remove larger holly trees, and plants growing within 20 feet of the Trail of Hope at Central Park, in conjunction with Capital Construction. It is recommended to monitor the removal site for regrowth from berries or root materials. Holly removal will continue at Central Park in conjunction with the Trail of Hope development and then across the entire park.

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- Japanese Knotweed - Japanese knotweed treatment began in 2010 with manual removal of 12 locations in 6 parks. In 2011, 12 sites were added totaling 23 sites. At that time, knowledge about knotweed treatment was limited, and there was various reports indicating that repeated plant pulling may or may not be effective. All of the Burnaby treatment sites proved the theory to be true. Through the disturbance of pulling plants, the knotweed infestations spread with no signs of noticeable die-back.

Following the city's Integrated Pest Management Program, where manual treatment was not effective and there is no known biological control, permission for an herbicide treatment trial in 3 parks was pursued and approved in 2012. The trial was established at Taylor Park, Burnaby Mountain and Fraser Foreshore Park. A stem injector gun, with glyphosate, was used to treat each stem of the infestations. Stems that were too small (< 2cm diameter) to accept the needle in the gun were left for treatment at a later time. One round of treatment encompassed three site visits, the first in late August, the second 6 weeks later to treat regrowth or missed stems, and the third in the spring of the following year. The trial showed that herbicide treatment was more effective at killing knotweed than manual pulling. Depending on the site conditions, herbicide use resulted in 50% to 100% mortality in the treated plants.

In 2013, all the knotweed manual pull sites from previous years were treated with herbicides and additional sites were targeted for treatment. The new sites included areas where knotweed patches occurred in the middle or edge of a grass area that need to be mowed weekly, and trail edges that were mowed systematically. In 2013 there were 64 sites being monitored or treated, in 10 Parks

In 2014, approval was given to use of foliar spray application, and to treat areas adjacent to Park lands. Foliar spray allows treatment of the stems too small to be treated by stem injection. The addition of foliar spray makes it possible to treat 100% of the plants in the infestation at one time. The approval to treat knotweed in areas adjacent to Parklands provided the ability to treat infestations that cover 2 or more property lines ensuring entire infestations are treated, preventing infestation spread into Parklands. Both of these allowed more thorough treatment of knotweed, ensuring better results.

In 2014, with the added tool of foliar spray, there was a dramatic change in treatment success. 36 sites show 100% mortality, while the majority of sites exhibited some regrowth, there was a major decrease in stem density. At the end of 2014 there were 111 sites being monitored or treated, in 23 park or trail sites. Right-of-Ways through 2 park sites were also treated as part of the program.

For 2015 it is recommended that all sites be monitored for re-growth and retreated as necessary, and an expansion of foliar spray treatment to infestation of smaller stems, in a timely manner. New sites will be added to the management plan and will be selected based on budget and on a priority of providing sightlines and public safety. Locations that

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 Re: Update on the Burnaby Invasive Plant Management in
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are maintained more often, and therefore, more likely to spread knotweed, will be placed higher on the priority list over areas that are flail mowed or are only maintained once a year.

EDUCATION AND PARTICIPATION

Public and staff awareness and education are a key to controlling the spread of invasive species. The community helps staff by reporting new infestations before they grow large, hard to manage and costly to treat. There have been 3 avenues developed to help educate/inform the public as noted below:

- **PUBLIC CALLS AND MEDIA**

Responding to calls and emails from residents and communicating one-on-one to residents has been a key part in education and raising awareness. Concerned residents are calmed and re-assured when they understand the challenges with invasive species, and know the City has a program and are proactively addressing the issue. Direct calls and emails, information on the city website along with articles in the local papers have helped raise awareness of invasive species in Burnaby. See Appendix 1.

- **WORKSHOPS**

Educational workshop series, *Cut it Out*, was initiated in 2009 to provide information to Burnaby resident around invasive species, the top invasive plants in Burnaby, removal and control techniques, and gardening techniques to naturally keep invasive plants out of the garden. The workshops are presented by local invasive plant experts the Invasive Species Council of Metro Vancouver, Evergreen and local landscaping company Good Earth. The workshop series continues to run each April and continues to be well received. The workshops will be offered to the public on an annual basis.

- **VOLUNTEER INVASIVE PLANT REMOVALS**

Hands on experience with invasive plant removals have helped educate community volunteers and built a sense of park ownership. Participants of invasive plant removals quickly grasp the damage invasive plants can do to the environment and become determined to contribute to a solution to the problem. Burnaby supports community led invasive plant removals in various parks throughout the community.

Local Streamkeeper groups conduct their own ongoing invasive plant removals on their project sites. The contributions of groups such as the Byrne Creek Streamkeepers, the Eagle Creek Streamkeepers, and the Stoney Creek Streamkeepers have been invaluable in keeping invasive plants under control, and keeping the City abreast of other environmental issues in those areas. In addition, environmental education groups also help with invasive plant removals in the course of the work in Burnaby. The Evergreen Foundation at Jim Lorimer Park, Green Teams of Canada, and Burnaby based corporate groups such as TELUS, Kodak, and Delta Hotels. It is recommended to continue to

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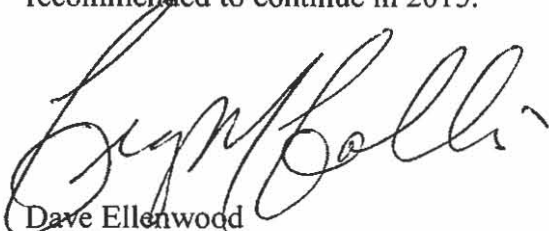
support community groups who are interested in participating in invasive plant removals in Burnaby Parks. See Appendix 1 for photographs.

LOCAL REPRESENTATION IN REGIONAL COMMITTEE

Burnaby Parks has a representative on the Board of Directors for the Invasive Species Council of Metro Vancouver since the fall 2009. This has allowed Burnaby Parks to be connected with other municipalities on invasive species issues, and regional treatment and education efforts, while staying abreast to the newest updates on invasive species – new regional priority species, new and changing treatment/control techniques, new and changing tools and research. This link to growing and changing knowledge/technology in invasive species management provides valuable information that contributes to the City's Invasive Species Management plan. It also places Burnaby in the forefront of action with addressing invasive species locally. It is recommended to continue with a Burnaby Representative on the Invasive Species Council of Metro Vancouver.

SUMMARY

Stemming from a 2009 baseline survey of invasive plants in parks, a strategy and management plan was devised and approved by the Environment Committee and Council for removal and control of invasive plants throughout Burnaby parks. Species dependant, treatment involves manual pulling and digging of roots or treatment of herbicides through stem injection and foliar spray. Through adaptive management, all invasive plants in treatment areas are showing reduced growth and spread, and in some cases, there has been no regrowth for over 2 years. Along with on the ground treatment, public awareness and education programs, with participation in regional efforts are integral parts of the Invasive Species Management in Parks. All current activities are recommended to continue in 2015.

for. 
 Dave Ellenwood
 DIRECTOR PARKS, RECREATION & CULTURAL SERVICES

HE:my:tc

Attachments

p:\admin\tc\data\wp\he\reports\environ cmttee – update on the burnaby invasive plants management in parks

Copied to: City Manager

To: Environment Committee
 From: Director Parks, Recreation & Cultural Services
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Table 1. Top 13 Invasive Plant Species targeted during initial survey

Common Name	Species Name
Butterfly bush	<i>Buddleia davidii</i>
Cherry-laurel (English laurel)	<i>Prunus laurocerasus</i>
Clematis	<i>Clematis vitalba</i>
English holly	<i>Ilex aquifolium</i>
English ivy	<i>Hedera helix</i> and <i>Hedera hibernica</i>
Giant hogweed	<i>Heracleum mantegazzianum</i>
Goutweed (Bishop's weed)	<i>Aegopodium podgaria</i>
Hedge bindweed (common morning glory)	<i>Convolvulus sepium</i>
Hops (common)	<i>Humulus lupulus</i>
Himalayan blackberry	<i>Rubus discolor</i> and <i>Rubus laciniatus</i>
Knotweed species	<i>Fallopia</i> spp. and hybrids (syn. <i>Polygonum</i> spp.)
Lamium (yellow lamium/yellow archangel)	<i>Lamium galeobdolon</i>
Periwinkle	<i>Vinca minor</i>
Pickrel weed	<i>Pontederia cordata</i>
Policeman's helmet (Himalayan balsam)	<i>Impatiens glandulifera</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Reed canary grass	<i>Phalaris arundinacea</i>
Scotch broom	<i>Cytisus scoparius</i>
Small flowered touch-me-not	<i>Impatiens parviflora</i>
Spurge laurel (daphne-laurel)	<i>Daphne laureola</i>
Yellow flag iris	<i>Iris pseudacorus</i>

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Table 2. Total area of infestation by invasive species in the City of Burnaby, 2009

Common Name	Area
Himalayan blackberry	99.78 ha
English ivy	32.50 ha
Reed canary grass	12.23 ha
Policeman's helmet	11.51 ha
Knotweed species	6.71 ha
Lamium	6.25 ha
English holly	4.59 ha
Small flowered touch-me-not	3.26 ha
Cherry-laurel	2.15 ha
Common hops	2.12 ha
Scotch broom	2.00 ha
Periwinkle	1.37 ha
Purple loosestrife	0.78 ha
Hedge bindweed	0.60 ha
Clematis species	0.27 ha
Yellow flag iris	0.14 ha
Goutweed	0.11 ha
Spurge laurel	0.07 ha
Butterfly bush	45 m ²
Pickrel weed	35 m ² *
Giant hogweed	<1 m ² *

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Table 3. Summary of work complete in 2014

Treatment Program	Project	Start Year	Total Crew Hours	Total Volume (m ³)	Total Plants	Number of Treatment Units	Number of Parks
Knotweed Maintenance	Mow barrier and brushing	2010	102	21	-	60	18
Park sweep	Cameron Park & George McLean	2010	107	9.75	-	N/A	2
	Central Park west zone	2014	15	3	-	N/A	1
	Deer Lake: holly & laurel	2013	128	32	-	N/A	1
	Central Park: Trail of Hope: holly	2014	150	26*	-	N/A	1
Species sweeps	Butterfly bush	2010	48	4	-	44	8
	Pickeralweed	2009	8	0.25	-	17	2
	Purple loosestrife	2010	64	4	-	N/A	1
	Scotch broom	2010	490	164	-	N/A	6
	Aquatic plants: Burnaby Lake	2012	90	5	-	1	1
	Blackberry: Harrier Nest Site	2014	33	15	-	1	1
	English ivy	2011	1358	3105 trees	-	N/A	47
Restoration	Taylor Park	2010	119	10.25	70	2	1
	Jim Lorimer	2014	97	6.5	145	1	1
	Warner Loat	2013	65	8	171	1	1
TOTAL			2874	309	386	-	-

To: *Environment Committee*
 From: *Director Parks, Recreation & Cultural Services*
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Table 4. Parks with priority Ivy infestations

Common Name
Boundary Creek Ravine
Kaymar Creek Ravine
Stride Avenue Ravine
Burnaby 200 Conservation Area
Warner Loat
Boundary Creek Ravine
Eagle Creek Ravine
Lubbocks Wood
Macey
Braemar/Bunckingham/Malvern
Burnaby Lake
Cottonwood
Barnet Marine
Capitol Hill
Montrose

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Table 5. Treatment Summary

Treatment Event	Date	Number of sites treated or monitored	Number of sites with 100% mortality (cumulative)	Number of site with stems too small to inject ^A
1	Sep 13-19, 2012	17	N/A	5
2	Aug 1-15, 2013	64	5	27
3	Sep 24-27, 2013	64	6	30
4	Jul 2-28, 2014	102	7	N/A ^B
5	Oct 27-31, 2014	111	36	N/A ^B

^A Stems on these sites were treated if injectable size.

^B In 2015 if stems were too small to inject they were treated by foliar application

Table 6. Number of treated sites per treatment round

	Sep 2012	Aug 2012	Sep 2013	Jul 2014	Oct 2014
Initial Treatment	12 (+5 too small)	20 (+25 too small)	0	50	7
2 nd Treatment		4 (+1 too small)	18 (+29 too small)	8	32
3 rd Treatment			4 (+1 too small)	36	7
4 th Treatment				4	20
5 th Treatment					1

To: Environment Committee
 From: Director Parks, Recreation & Cultural Services
 Re: Update on the Burnaby Invasive Plant Management in Parks
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Appendix 1

Media

City of Burnaby - Local Government Marvelous Home 20+

2,591 likes

Janice Kurylowich Bondi, Jill Porter and 4 others like this



Invite your friends to like this Page

ABOUT

The City of Burnaby is a dynamic and vibrant city with beautiful parks and lakes located in the geographic centre of Metro Vancouver
www.burnaby.ca

<http://www.burnaby.ca/>

Suggest Edits

APPS

Be Active

Live Green

Welcome

PHOTOS



City of Burnaby - Local Government
 June 4

Telus Volunteers Make an Impact (5 photos)

Thank you to 12 lovely volunteers from TELUS, participating in the TELUS Day of Service as part of the City's Environment Week activities. Participants pulled ivy and planted native plants at Burnaby City Hall... they did a wonderful job. Thank you!



Unlike Comment Share 9

City of Burnaby - Local Government
 May 31

Burnaby.ca website, online services/other websites will NOT be available from 5:00 PM today, Saturday, May 31 until 2:00 AM, Sunday, June 1 for planned system maintenance. Phone service to Community and Cultural Centres, Libraries and Golf Courses will not be available from approximately 6:30-11:00 PM May 31. We thank you for your patience.

Chat (10)

<http://www.burnaby.ca/City-Services/Policies--Projects---Initiatives/Environment/Green-Initiatives-and-Public-Education/Invasive-Species.html?>

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 From: Director Parks, Recreation & Cultural Services
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City of Burnaby

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Invasive Species



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More Information on Invasive Species:

- Invasive Species Council of Metro Vancouver
- Evergreen Canada
- Invasive Species Council of BC
- Native Plant Society of BC
- E-Flora BC: Electronic Atlas of the Plants of BC
- Ministry of Agriculture
- Ministry of Forests, Lands and Natural Resource Operations
- Ministry of Environment
- Government of Canada
- Canadian Food Inspection Agency

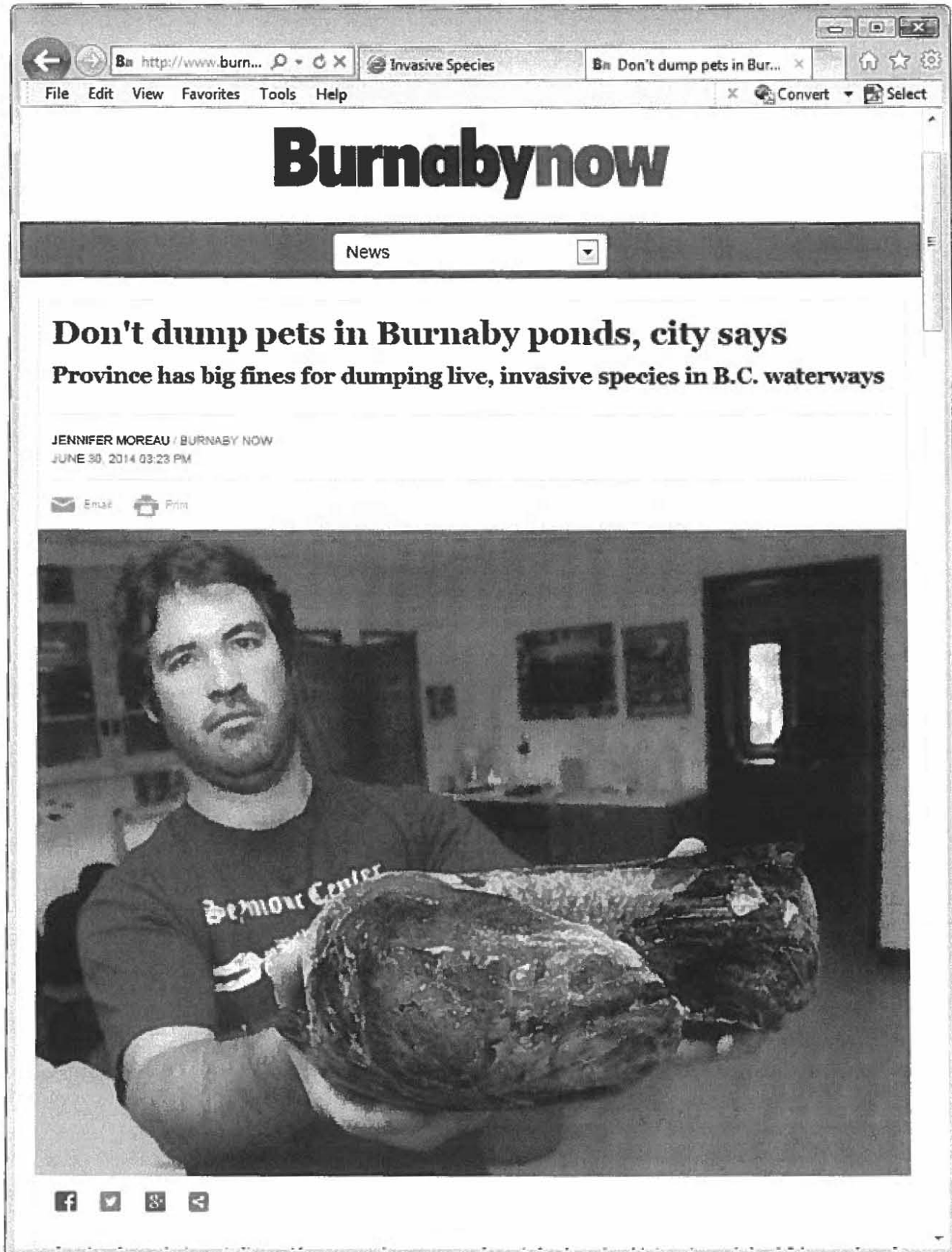
Invasive Species

Invasive species are exotic or non-native plants or animals that adversely affect local habitats and also have economic, environmental and social impacts. Once established, invasive plants and animals are very costly to manage, control and/or remove. Previously, invasive species were only a concern to land managers who were trying to maintain biodiversity in management areas. In recent years, invasive species have become more of a residential concern, as invasive plants and animals have begun to impact the enjoyment of private properties.

Invasive Animals

Invasive animals are typically larger and more aggressive than their local counterparts and outcompete native species for food and habitat. Typically, invasive animals don't have a predator or other conditions that might keep their population in check. Common invasive animals, amphibians and insects in Burnaby include the European Green / Black Spider, the European Starling, the European Chalk Pigeon, the American

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Meeting 2015 Oct 13

COMMITTEE REPORT

TO: CHAIR AND MEMBERS
ENVIRONMENT COMMITTEE

DATE: 2015 October 8

FROM: DIRECTOR PLANNING AND BUILDING

FILE: 33000 01
Reference: Environmental Factors

SUBJECT: CLIMATE CHANGE WARNING LABELS ON GAS PUMP NOZZLES

PURPOSE: To respond to Council's request for a report on the issue of climate change warning labels on gas pump nozzles, based on the delegation from the non-profit group Our Horizon.

RECOMMENDATIONS:

1. **THAT** Council consider future opportunities for public communication about climate change in the context of the regional and municipal sustainability policy framework, including Burnaby's Environmental Sustainability Strategy and Community Energy and Emissions Plan.
2. **THAT** copies of this report be provided to John Nguyen representing Our Horizon, to the Metro Vancouver Climate Action Committee and to Metro Vancouver member municipalities.

REPORT

At the Regular meeting of Council on 2015 July 6, a delegation from the non-profit organization Our Horizon requested that Burnaby support affixing warning labels about climate change to gas pump nozzles. Arising from the discussion, Council requested that staff report on this matter. This report responds to that request.

1.0 BACKGROUND

Our Horizon is a national non-profit organization campaigning to raise awareness about the need for action on climate change through public education that uses warning labels on vehicle fuel ("gas") pump nozzles. The proposed warning messages are based on the model of cigarette health warnings which the proponents state have been effective in changing people's behaviour. Our Horizon has drafted example label designs which depict images, such as a caribou cow and calf, along with text, such as "Warning – use of this fuel contributes to climate change which may put up to 30% of species at a likely risk of extinction." The labels aim to connect these climate change effects to the specific personal action of filling a vehicle tank with gasoline in order to encourage people to take action. The representatives requested that Burnaby support the campaign and endorse a resolution to the Union of BC Municipalities (UBCM).

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1.1 Support to Date for Gas Pump Warning Labels

As of the end of August 2015, warning labels on gas pump nozzles have been supported by local government actions as outlined below:

- In January 2015, the City of West Vancouver supported drafting a resolution to the Union of BC Municipalities (UBCM) and Federation of Canadian Municipalities (FCM) to require all gas stations in Canada to display warning labels on pump nozzles. Subsequently, the City of Colwood advanced a slightly different draft resolution entitled “Warning Labels for all Fossil Based Liquid Fuels” (see *Appendix 1, attached*).
- Between January and July 2015, the City of Moncton NB, City of Guelph ON, District of Saanich BC, Association of Vancouver Island and Coastal Communities, City of Waterloo ON, and City of Oakville ON, voted to support the UBCM resolution.
- In June 2015, the City of North Vancouver voted to bring forward a bylaw requiring all public gas stations in the City to install climate change warning labels. This would apply to all six stations currently operating, as well as any future additional stations. At this time, North Vancouver has given first reading to a Business Licence Bylaw amendment and is proceeding with Public Hearing.

1.2 UBCM Resolution

The District of West Vancouver passed a resolution, (see *Appendix 1, attached*) requesting that all retail petroleum vendors in Canada be required to affix warning labels onto gas pump nozzles, on the basis that: a) combustion of vehicle fuel contributes to climate change, and b) that health labels are required on tobacco products.

The resolution forwarded to the UBCM at their September 15th, 2015 Convention was sponsored by the City of Colwood, and was entitled “Warning Labels for All Fossil Based Fuels,” (see *Appendix 1, attached*). This resolution also noted the contribution of vehicle fuels to climate change, and added the concern of sea level rise impacts on coastal communities, but did not include the reference to tobacco labeling.

The resolution (No. B112) was endorsed with a minor amendment to read:

THEREFORE BE IT RESOLVED that UBCM support, and that member local governments will implement where possible, legislation to require retailers of petroleum products to provide plastic sleeves (nozzle toppers) with warning labels on pump handles for all fossil based liquid fuels.

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2.0 DISCUSSION

2.1 Jurisdiction

At this time, the authority of local or national governments to legislate gas pump warning labels has yet to be tested in court. Our Horizon partnered with the University of Victoria Law Society on a legal backgrounder on this issue. The backgrounder outlines a rationale in support of the issue being within local government jurisdiction, for example as the basis to enact a bylaw, but also states that legal challenge by petroleum businesses is likely and advises that local governments seek their own legal opinion. Due to the potential for a legal challenge to the City and the associated costs of a potential challenge, as well as for other reasons discussed below, it is not recommended that the City pursue a bylaw on this matter at this time.

2.2 Business Perspective

Consultation with fuel vendors is not reported to have been undertaken in jurisdictions where support or action is proposed for warning labels. Business associations representing vehicle fuel vendors in other jurisdictions have voiced opposition to legislation requiring gas pump warning labels¹ on the basis that it unfairly portrays the industry in a negative light, has associated costs and may reduce sales and/or compete with advertising revenue if they already use nozzle signage for product promotion.

2.3 Communicating About Climate Change

Climate change has been called a “wicked” problem: it is complex, with diffuse impacts that occur at a range of scales from local to global; it is difficult to clearly define (different stakeholders have different views of the nature of the problem and appropriate responses); and it crosses governance boundaries². Solutions to climate change are not simple. This means, among other implications, that it can seem overwhelming and distant to an individual person’s everyday decisions. Making the connection between a person’s actions – in this case, the action of filling up a vehicle fuel tank – and climate change impacts could help to personalize the issue so that some people feel more compelled to change their behaviour. However, this approach should be carefully considered for various reasons including those listed below³.

- Gas pump labels would not distinguish between consumers with different patterns of vehicle fuel consumption, motivations, or reasons for driving. Negative messaging that relies on fear and guilt may cause some people to feel angry and distance themselves from consideration of the issue, or may generate other unintended reactions.

¹ Huffington Post (online): “Gas Retailers Line Up Against Climate-Change Warning Labels On Pumps” 2015-05-26, accessed August 2015: http://www.huffingtonpost.ca/2015/05/26/climate-change-warnings-gas-pumps_n_7441534.html

² For example, see Chris Reidy, “Climate Change is a Super Wicked Problem”, accessed August 2014: <http://chrisriedy.me/2013/05/29/climate-change-is-a-super-wicked-problem/>

³ These points draw on literature sources including: Marshall, G. *Don’t Even Think About It – Why Our Brains are Wired to Ignore Climate Change*. Bloomsbury USA, New York. 2014.

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- Research has shown that many people continue to ignore or ‘disbelieve’ in climate change and its impacts, not due to an absence of information, but rather for societal, culturally influenced and other reasons. Presenting information in the absence of a frame that addresses these complex issues may not support further consideration of this significant issue.
- Climate change has vast social justice, international security, economic and ecological impacts. Framing climate change as an “environmental” issue, for example using imagery of polar bears, caribou and other “charismatic megafauna” as typically employed by environmentalist groups (including Our Horizon), may not resonate well with those who do not identify with this imagery.
- Portraying climate change as something occurring in distant places, for example drought-stricken farmers in an African country (as shown in one of the Our Horizon labels) can frame the issue as having little relevance to people here, further ‘distancing’ the issue from a local context, and as such may detract from the intent of the ads.

Although the example label designs proposed by Our Horizon could be tailored to convey the message using different images than those described above, determining the best approach requires further consideration.

Finally, Our Horizon equates climate change warning labels with cigarette health labels. However, cigarette smoking is a different kind of issue: it is a relatively simple problem where the cause (smoking) is closely and directly tied with a very personal negative effect (disease), and the solution (quitting smoking) is obvious and can be immediately acted upon by a person, with immediate benefits. Climate change is a complex problem with diffuse impacts that requires society working together in creative ways that break down cultural and societal barriers. As such, the approach used for cigarette labels may not serve as an appropriate model for communicating about climate change.

In light of these factors, messaging and communication about climate change needs to be undertaken carefully and strategically.

2.4 Considerations for Climate Change Messaging Approaches

Climate change can be communicated in many different ways. Our Horizon is promoting gas pump labels as a low-cost, opportunistic approach, to support broader dialogue on the issue. Regardless of the medium for communication, factors to consider that may address some of the concerns outlined above include the following.

- The type of messaging approach should be carefully considered and framed, and based upon evidence for its effectiveness, in order to overcome social and cultural barriers specific to the issue of climate change. Research could be undertaken to better address these concerns, for example using stakeholder focus groups and other accepted methodologies.

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- Approaches could draw upon other successful public information campaigns undertaken in the region involving complex social and behavioural issues, such as recycling, food scraps, composting and drinking water conservation.
- Approaches may need to be adaptable and tailored to the local context, in order to communicate views on climate change that best support municipal and regional greenhouse gas (GHG) reduction objectives, and to appeal to the particular values held by people in different cities and towns, in order to span a diversity of views and opinions.
- Positive messaging approaches could be considered and provide information about specific things people can do to reduce GHG emissions. This could include encouraging walking or cycling more, facts about the benefits of using transit and fuel-efficient vehicles, and promoting programs and incentives such as for electric vehicles and car-sharing.

These considerations are just some examples of the context within which effective public communication on this complex issue could be undertaken.

2.5 Relationship to Burnaby's Community Energy and Emissions Plan (CEEP) and Environmental Sustainability Strategy (ESS)

Burnaby is developing a Community Energy and Emissions Plan (CEEP) which will outline a target for reducing community GHG emissions, with supporting goals, strategies and actions. A high level summary of the proposed approach for the CEEP, including targets, goals and strategies, is anticipated to form part of the public consultation for Burnaby's Environmental Sustainability Strategy (ESS) in 2016, pending Council approval of Phase 3 – *Draft ESS*. A draft CEEP would then be shared publicly, prior to seeking Council approval of the final CEEP in 2016.

Burnaby's ESS addresses climate change and GHG emissions reduction through several of the ten broad themes and related goals:

- **Breathe** (Climate and Air Quality) – *A community resilient to climate change, with clean air and low carbon emissions.*
- **Live** (Land Use Planning and Development) – *A network of compact and complete communities, within a fabric of healthy ecosystems.*
- **Move** (Transportation) – *A walkable, bikeable, and transit-supported city that supports a healthy community and environment.*
- **Build** (Buildings and Energy) – *Buildings and infrastructure that have a positive impact on the environment.*

The ESS framework of goals, strategies and actions has been developed based upon extensive public and stakeholder engagement, and a Draft ESS is currently being prepared for a final phase of public consultation.

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Once adopted by Council, implementation of both the ESS and CEEP presents an opportunity to highlight opportunities for action on the part of the City, other levels of government, and individuals. This will provide a further context for communicating about climate change in a way that addresses the City's broad goals for sustainability. Specific approaches for communicating and engaging people on this issue, which could include communication approaches as described in Section 2.4., can be considered as part of future ESS and CEEP implementation.

3.0 CONCLUSION

Climate change is a critical and complex problem with social, economic and environmental impacts occurring at many different scales. Therefore, strategies for communication about this issue need to be carefully considered to ensure they engage the community and serve the directions set by the City.

The specific approach proposed by Our Horizon presents some concerns as outlined in this report. Nevertheless, gas pump nozzle signage in general, as a medium for communicating about climate change, presents an option for future consideration.

Therefore, it is recommended that Council consider future opportunities for public communication about climate change in the context of the regional and municipal sustainability policy framework, including Burnaby's ESS and CEEP.


 Lou Pelletier, Director
 PLANNING AND BUILDING

LT/sla/sa
Attachment

cc: City Manager
 Director Engineering
 Director Finance
 City Clerk

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APPENDIX 1

WEST VANCOUVER RESOLUTION AND COLWOOD-SPONSORED UBCM RESOLUTION

1. West Vancouver Resolution:

RECOMMENDED THAT:

Council support the following resolution be advanced for consideration at the September 21/25, 2015 Union of British Columbia Municipalities (UBCM) conference and the June 5/8, 2015 Federation of Canadian Municipalities (FCM) convention:

Whereas there is evidence that combustion of petroleum products such as gas and diesel in vehicle engines contributes to greenhouse gas emissions that affect natural systems in ways that are injurious to human health and the environment, and

Whereas point-of-sale warning labels have been required for other consumables, such as tobacco products, which has effectively curbed use of harmful products,

Therefore be it resolved that all vendors of retail petroleum products in Canada be legislated to provide warning labels on all pump handles (pump talkers), and that those companies who do not have this feature on their pump handle be obligated to fit them with the plastic sleeves which will allow warning labels to be displayed.

2. City of Colwood Resolution to UBCM

B112 WARNING LABELS FOR ALL FOSSIL BASED LIQUID FUELS Colwood

WHEREAS there is evidence that combustion of petroleum products such as gas and diesel used in vehicles contribute to greenhouse gas emissions that affect natural systems in ways that are injurious to human health and to the natural environment upon which we all depend for food and life;

AND WHEREAS sea level rise resulting from greenhouse gas emissions will cause significant harm to coastal communities:

THEREFORE BE IT RESOLVED that UBCM support, and will implement where possible, legislation to require retailers of petroleum products to provide plastic sleeves (nozzle toppers) with warning labels on pump handles for all fossil based liquid fuels.

Amended version of Resolution No. B112 (endorsed): THEREFORE BE IT RESOLVED that UBCM support, and *that member local governments* will implement where possible, legislation to require retailers of petroleum products to provide plastic sleeves (nozzle toppers) with warning labels on pump handles for all fossil based liquid fuels.