



**REVISED**

## **ENVIRONMENT COMMITTEE**

### *NOTICE OF OPEN MEETING*

**DATE: TUESDAY, 2016 NOVEMBER 08**

**TIME: 6:00 PM**

**PLACE: Council Committee Room, Main Floor, City Hall**

### **A G E N D A**

<b>1.</b>	<b><u>CALL TO ORDER</u></b>	<b><u>PAGE</u></b>
<b>2.</b>	<b><u>MINUTES</u></b>	
a)	Open meeting of the Environment Committee held on 2016 September 13	1
<b>3.</b>	<b><u>CORRESPONDENCE</u></b>	
a)	Correspondence from Kate Gordanier-Smith Re: AVICC Motion to Oppose Old-Growth Logging	9
b)	Correspondence from Canadian Wildlife Service, Environment and Climate Change Canada Re: Input on the Government of Canada's Draft Policies on the Implementation of the Species at Risk Act	10
c)	Correspondence from Metro Vancouver Re: Request for Assistance with Promoting RateOurHome.ca Campaign	11
d)	Correspondence from Metro Vancouver Re: Metro Vancouver 2015 Construction and Demolition Waste Composition Monitoring Program	18
e)	Memorandum from the City Clerk Re: Final Environmental Sustainability Strategy (ESS) and Final Community Energy and Emissions Plan (CEEP)	25

**4. REPORTS**

- |    |  |    |
|----|--|----|
| a) | Report from the Director Parks, Recreation and Cultural Services<br>Re: Update on the Burnaby Invasive Species Management in Parks | 51 |
| b) | Report from the Director Planning and Building<br>Re: 2017 Environmental Awards Program  | 60 |

**5. NEW BUSINESS**

**6. INQUIRIES**

**7. ADJOURNMENT**



## **ENVIRONMENT COMMITTEE**

### **MINUTES**

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, **2016 September 13** at 6:00 p.m.

#### **1. CALL TO ORDER**

**PRESENT:** Councillor Anne Kang, Chair  
 Mr. Bill Brassington Jr., Citizen Representative  
 Mr. Peter Cech, Citizen Representative  
 Ms. Peggy Hua, Citizen Representative (*arrived at 6:07 p.m.*)  
 Mr. Frank Zhao, Citizen Representative

**ABSENT:** Councillor Sav Dhaliwal, Vice Chair  
 Councillor Pietro Calendino, Member

**STAFF:** Mr. Dipak Dattani, Deputy Director Engineering  
 Ms. Lee-Ann Garnett, Assistant Director Long Range Planning  
 Ms. Gisele Caron, Purchasing Manager  
 Ms. Lise Townsend, Ecosystem Planner  
 Ms. Melinda Yong, Environmental Technician, Parks Design  
 Ms. Blanka Zeinabova, Administrative Officer  
 Ms. Nikolina Vracar, Administrative Officer

The Chair called the Open meeting to order at 6:06 p.m.

#### **2. MINUTES**

*\*Ms. Hua arrived at the meeting at 6:07 p.m. and took her place at the Committee table.*

##### **a) Open meeting of the Environment Committee held on 2016 April 12**

MOVED BY MR. CECH  
SECONDED BY MR. BRASSINGTON JR.

THAT the minutes of the Open meeting of the Environment Committee held on 2016 April 12 be adopted.

CARRIED UNANIMOUSLY

**3. CORRESPONDENCE**

MOVED BY MR. ZHAO  
SECONDED BY MS. HUA

THAT the correspondence be received.

CARRIED UNANIMOUSLY

**a) Correspondence from Kierra Enns**  
**Re: Concerns Regarding Merit Insecticide**

Correspondence was received from Ms. Kierra Enns expressing concerns regarding use of Merit insecticide, its harmful effects to bees and various other insects, and the need to reduce the use of insecticides.

Staff responded to Ms. Enns noting that the City introduced the Pesticide Use Control Bylaw in 2009 which restricts the use of cosmetic pesticides on residential and public lands. Under this Bylaw, the use of Merit for managing European Chafer would not be permitted in the City.

**b) Correspondence from Rupert and Franny Yakelashek**  
**Re: Federal Bill of Environmental Rights**

Correspondence was received from Rupert (12 years old) and Franny (9 years old) Yakelashek requesting the City consider writing a letter to Prime Minister Justin Trudeau, Federal Minister of Environment and Climate Change Catherine McKenna and other federal leaders, including local MPs, asking them to champion the Federal Bill of Environmental Rights.

Staff noted that Council supports the Federal Bill of Environmental Rights.

**c) Correspondence from Andrew Weaver, MLA**  
**Re: Introducing an Environmental Bill of Rights**

Correspondence was received from Mr. Andrew Weaver, MLA, Oak Bay-Gordon Head, regarding the introduction of Bill M236 – Environmental Bill of Rights Act, 2016. This Bill states that British Columbians' have a right to a healthy environment and that it is the government's responsibility to protect it for this generation as well as those to come.

There are five key components to this Bill:

1. outlines the Rights and Responsibilities of the BC Government and its residents when it comes to environmental decision making;
2. creates a publicly accessible one-stop-shop for environmental information;



3. ensures that all Ministries consider the environmental impacts their operations may be responsible for;
4. creates an Environmental Commissioner responsible for investigating violations, providing the public an opportunity to participate in and access the decision making process, and providing regular reports about the state of the BC environment;
5. Protects whistle blowers who act to prevent or mitigate environmental damage.

**d) Correspondence from the City of North Vancouver  
Re: Cigarette Butt Deposit Return Program Resolution**

Correspondence was received from Ms. Karla Graham, City Clerk, the City of North Vancouver, regarding Cigarette Butt Deposit Return Program, and advising that Council, at its Regular meeting on 2016 May 30, unanimously endorsed the following resolution:

THAT Council submit the following resolution to the Union of BC Municipalities:

WHEREAS cigarette butts are a significant source of litter in many local communities:

WHEREAS cigarette butts are non-biodegradable and leach toxic organic chemicals and heavy metals into the environment impacting soil, fresh and saltwater, and have a significant negative impact on the aquatic and land-based organisms that ingest them;

WHEREAS a Cigarette Butt Deposit – Return Program offers a promising solution to significantly reduce cigarette butt litter and improve environmental health;

THEREFORE BE IT RESOLVED THAT the BC Ministry of Environment implement a province-wide Cigarette Butt Deposit – Return Program for the elimination of cigarette litter.

THAT the resolution be circulated to UBCM member municipalities in advance of the 2016 convention;

AND THAT the City implement an outreach program aimed at reducing cigarette butt litter.

Arising from discussion, the following motion was introduced:

MOVED BY MR. BRASSINGTON JR.  
SECONDED BY MR. CECH

THAT Council send a letter to UBCM in support of the City of North Vancouver's resolution regarding Cigarette Butt Deposit Return Program, and the City of North Vancouver be so advised.

CARRIED UNANIMOUSLY

**e) Correspondence from Environment Canada**  
**Re: Amendment to Schedule 1 of the Species at Risk Act**

Correspondence was received from Environment Canada regarding a proposed Order to amend Schedule 1 of the Species at Risk Act (SARA). The proposed Order applies to nine additions to SARA Schedule 1 and four reclassifications for species in British Columbia.

**f) Correspondence from Metro Vancouver**  
**Re: Mattress and Bulky Furniture Extended Producer Responsibility**

A copy of correspondence from Mr. Greg Moore, Chair, Metro Vancouver Board, addressed to the Minister of Environment Mary Polak, was received regarding mattress and bulky furniture extended producer responsibility. It was noted that establishing an EPR program for mattresses and bulky furniture would result in a number of benefits.

**g) Correspondence from Weiping Huang**  
**Re: Save the Trees and Plants on Private Properties**

Correspondence was received from Ms. Weiping Huang expressing concerns with cutting and removing trees and plants from private properties around the City.

Staff advised that Burnaby Tree Bylaw was established in 1996 to protect the City's trees and neighbourhood character. The Bylaw is based on the following principles: a balanced approach, reasonable cost, simplicity and effectiveness, and the urban forest, and aims to protect 'significant' trees within the City and ensure an adequate amount of replacement trees to enhance the urban forest.

**h) Correspondence from Climate Action Secretariat,**  
**Ministry of Environment**  
**Re: BC Climate Leadership Plan**

Correspondence was received from Ms. Susanna Laaksonen-Craig, Head, Climate Action Secretariat, Ministry of Environment, advising that the BC

Provincial Government unveiled the first suite of new actions in its Climate Leadership Plan. With 21 new actions, the Plan is moving closer to the 2050 carbon reduction goal while growing a clean economy. The Plan will be updated over the course of the following year as work on the Pan-Canadian Framework on Clean Growth and Climate Change progresses.

**i) Correspondence from Trevor Mack**  
**Re: Creating Hydro Power from City Pipes**

Correspondence was received from Mr. Trevor Mack seeking the City consider creating hydro power from the City pipes. Mr. Mack provided the example of Portland and several other West Coast cities that are already generating power through a series of water pipes fitted with turbines.

Staff advised that the possibility to harness energy from municipal water pipelines has been investigated; however, the City does not have a business case, due to smaller pipes and low flow rates in the Metro Vancouver area.

**j) Memorandum from the Director Engineering**  
**Re: 2016 Water Conservation Poster Contest Winners**

A memorandum was received from the Director Engineering providing an overview of the winners of the water conservation poster contest. The winning artworks was displayed in June on bus shelters and eco-media bins at various locations in Burnaby.

**k) Memorandum from the Director Planning and Building**  
**Re: Burnaby Big Bend Tour**

A memorandum was received from the Director Planning and Building advising that at its meeting of 2009 February 2, Council endorsed the conclusions and actions arising from the Willard Street and Meadow Avenue public 'neighbourhood development' process. One of the actions referenced in the noted report was to "initiate a walking/driving tour of market gardens in the Big Bend area". Staff have worked with Burnaby Food First, Burnaby's community food security coalition, and Tourism Burnaby to develop the Tour.

The first edition of the Tour includes nine market gardens, nursery or farm locations in the Big Bend area including several in the Willard Street/Meadow Avenue area. The self-guided Tour was launched via media release issued by Burnaby Food First prior to 2016 May 23, and it's now available on-line.

**l) Memorandum from the Administrative Officer**  
**Re: Waterways of Burnaby: Discovering the Heritage &**  
**Nature of Burnaby's Still Creek Conservation Area**

A memorandum was received from the Administrative Officer advising that Council, at its meeting held on 2016 June 13, received and adopted the above noted report seeking funding to design and print a walking tour brochure for the Still Creek Conservation Area for the City's World Rivers Day on 2016 September 25.

**m) Memorandum from the City Clerk**  
**Re: Annual Drinking Water Quality Monitoring Report (2015)**

A memorandum was received from the City Clerk advising that Council, at its meeting held on 2016 June 20, received and adopted the above noted report. The report provides an overview of the regulatory context, outlines the drinking water quality program undertaken by staff, and includes associated sample results to provide evidence of potability and compliance with the BC Drinking Water Protection Regulation.

**n) Memorandum from the City Clerk**  
**Re: Regional Food System Strategy Action Plan**

A memorandum was received from the City Clerk advising that Council, at its meeting held on 2016 June 27, received and adopted the above noted report seeking endorsement of the Metro Vancouver Regional Food System Strategy (RFSS) Action Plan.

**o) Memorandum from the City Clerk**  
**Re: Spill Preparedness and Response in BC: Proposed**  
**Amendments to the Environmental Management Act and**  
**Proposed Regulations (IP3)**

A memorandum was received from the City Clerk advising that Council, at its meeting held on 2016 June 27, received and adopted the above noted report providing comments on the BC Spill Preparedness and Response Third Intention Paper.

**p) Memorandum from the Deputy City Clerk**  
**Re: Federation of Canadian Municipalities National Municipal**  
**Energy Infrastructure Task Force**

A memorandum was received from the Deputy City Clerk advising that Council, at its meeting held on 2016 July 25, received and adopted the above noted report providing the Federation of Canadian Municipalities National Municipal

Energy Infrastructure Task Force with comments on areas where improvements should be considered to the environmental assessment and National Energy Board processes that forms part of the Federal review and approval of major pipeline projects.

4. **NEW BUSINESS**

There was no new business brought before the Committee.

5. **INQUIRIES**

**Peter Cech – the Environmental Sustainability Strategy**

Mr. Cech inquired regarding the Environmental Sustainability Strategy update.

Staff advised that a report will be submitted to Council for approval in the near future.

6. **CLOSED**

Public excluded according to Sections 90 and 92 of the Community Charter.

MOVED BY MR. CECH

SECONDED BY MR. BRASSINGTON JR.

THAT this Open Committee meeting do now recess.

CARRIED UNANIMOUSLY

The Open meeting recessed at 7:29 p.m.

MOVED BY MR. CECH

SECONDED BY MS. HUA

THAT the Open Committee meeting do now reconvene.

CARRIED UNANIMOUSLY

The Open Committee meeting reconvened at 7:30 p.m.

Councillor Kang reminded the Committee members that World Rivers Day will be held on Sunday, 2016 September 26 at the Burnaby Village Museum, and invited everyone to attend.

**7. ADJOURNMENT**MOVED BY MR. CECHESECONDED BY MR. BRASSINGTON JR.

THAT this Open Committee meeting do now adjourn.

CARRIED UNANIMOUSLY

The Open Committee meeting adjourned at 7:31 p.m.

---

Blanka Zeinabova  
ADMINISTRATIVE OFFICER

---

Councillor Anne Kang  
CHAIR

SECTION 2  
 COUNCIL CORRESPONDENCE (2016 SEPT 29)  
 City Manager  
 Deputy City Manager  
 Dir. Parks, Rec & Cultural Svcs  
 Dir. Planning & Building  
 Environment Committee (Nov. 08)

**From:** Kathleen Rose [mailto: [REDACTED]]

**Sent:** September-20-16 8:49 PM

**To:** Clerks

**Subject:** RE: Please urge the UBCM to accept for discussion and support the AVICC motion to oppose old-growth logging

Dear Mayor Corrigan and Burnaby Councillors,

I understand that a motion was brought forward by Metchosin council, and has already been passed at the Association of Vancouver Island and Coastal Communities earlier this year, that old-growth forest on provincial Crown Land on Vancouver Island be protected from logging. I urge my city government to please support this proposal and make sure it's accepted to be voted on by the UBCM.

This is NOT a regional issue as argued by the UBCM resolutions committee. These precious trees are irreplaceable. They support complete ecosystems, sink carbon, are vital to flourishing First Nations culture and I can't believe our provincial government is allowing them to be destroyed for short term profit and jobs.

We need to save our old growth trees wherever they are found in B.C. I look to you all to help save these few remaining giants for the seven generations to come.

With gratitude,

Kate Gordanier-Smith  
 6314 Marine Drive  
 [REDACTED]



September 20<sup>th</sup>, 2016

**RE: Seeking your input on the Government of Canada's draft policies on the implementation of the *Species at Risk Act***

On September 19<sup>th</sup>, 2016, the Government of Canada posted seven draft policies on the Species at Risk Public Registry ([sararegistry.gc.ca](http://sararegistry.gc.ca)). These policies listed below support the predictable, clear and consistent implementation of the *Species at Risk Act*. As an individual, community, or organization which may be directly affected by these policies, we wanted to notify you of the opportunity to provide input.

We would welcome any comments you may have and are particularly interested in your response to the following:

- Do you find the policies clear and understandable?
- Do you have any concerns or recommendations regarding these policies?

The seven draft policies include:

1. [Policy on Critical Habitat Protection on Non-federal Lands](#)
2. [Policy on Protecting Critical Habitat with Conservation Agreements under Section 11 of the \*Species at Risk Act\*](#)
3. [Policy on Survival and Recovery](#)
4. [Policy Regarding the Identification of Anthropogenic Structures as Critical Habitat under the \*Species at Risk Act\*](#)
5. [Approach to the Identification of Critical Habitat under the \*Species at Risk Act\* when Habitat Loss is Not Believed to be a Significant Threat to the Survival or Recovery of the Species](#)
6. [Species at Risk Act Permitting Policy](#)
7. [Listing policy for Terrestrial Species at Risk](#)

You are invited to submit your feedback to the Species at Risk Public Registry at the following address: [ec.registrelep-sararegistry.ec@canada.ca](mailto:ec.registrelep-sararegistry.ec@canada.ca) by November 18<sup>th</sup>, 2016 or by contacting:

**Conservation Planning Unit**

Canadian Wildlife Service, Pacific Region  
Environment and Climate Change Canada  
5421 Robertson Road, Delta, BC, V4K 3N2  
[ec.ep.rpy-sar.pyr.ec@canada.ca](mailto:ec.ep.rpy-sar.pyr.ec@canada.ca)  
604-350-1900

For your information, related to the seven draft policies, the Government of Canada also posted the following final documents:

1. [Range Plan Guidance for Woodland Caribou, Boreal Population \(Final\)](#)
2. [The Species at Risk Act Policy Principles \(Final\)](#)

Should you have any questions regarding these materials, please contact us at the e-mail address provided above.  
Thank you for taking the time to provide us with your input.

Yours sincerely,

**Randal Lake**

Unit Head, Conservation Planning  
Canadian Wildlife Service, Pacific Region  
Environment and Climate Change Canada  
5421 Robertson Road, Delta, BC, V4K 3N2



File: CR-12-01  
Ref: RD 2016 Jul 29

SEP 30 2016

Mayor Derek Corrigan and Council  
City of Burnaby  
4949 Canada Way  
Burnaby, BC V5G 1M2

Dear Mayor ~~Derek~~ Corrigan and Council:

**Re: Request for Assistance with Promoting RateOurHome.ca Campaign**

At its July 29, 2016 regular meeting, the Board of Directors of the Greater Vancouver Regional District ('Metro Vancouver') considered a staff report on home energy labelling and adopted the following resolution:

*That the GVRD Board direct staff to forward the report dated June 7, 2016, titled "Update on Sustainability Innovation Fund Project – Home Energy Labelling Pilot Project" to member jurisdictions and provide access to the RateOurHome.ca campaign materials in an effort to increase municipal involvement in the campaign.*

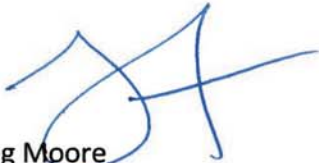
Metro Vancouver has established goals to reduce greenhouse gas (GHG) emissions by 33% by 2020 and 80% by 2050 from 2007 levels. Approximately one third of the GHG emissions in the region are from buildings, and of that, single-family homes are responsible for about 40% of the GHGs from buildings. Metro Vancouver is implementing RateOurHome.ca (formerly the *Home Energy Labelling Pilot Project*) in order to create awareness and make GHGs and energy use in homes more visible for everyone, and provide homeowners with a necessary tool to make informed decisions for their families and the environment.

The RateOurHome.ca campaign will launch throughout Metro Vancouver in October 2016. The key outreach channels of the campaign include a website, with an interactive map to view real EnerGuide home energy labels provided by Metro Vancouver residents, paid social media and online marketing, earned media, and targeted outreach (workshops and webinars) to real-estate agents and builders.

Our member jurisdictions are uniquely positioned to promote the RateOurHome.ca campaign to target audiences, namely homebuyers, home sellers, homeowners, real-estate agents and home builders. To this end, we request your assistance in ensuring that the RateOurHome.ca campaign materials described in the attached report reach the appropriate staff (e.g. in planning, permitting, sustainability or communications departments) at your local government.

If your staff have any questions or require additional information on the RateOurHome.ca program, please have them contact Erik Blair, Senior Policy and Planning Analyst at (604) 436-6747 or by email at Erik.Blair@metrovanancouver.org.

Yours truly,

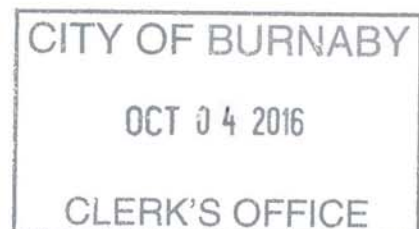


Greg Moore  
Chair, Metro Vancouver Board

GM/RQ/eb

Encl: Report titled "Update on Sustainability Innovation Fund Project – Home Energy Labelling Pilot Project" dated June 7, 2016.

18964275





To: Climate Action Committee

From: Eve Hou, Air Quality Planner, Parks, Planning and Environment Department  
Jerry Colman, Policy Coordinator, External Relations Department

Date: June 7, 2016 Meeting Date: July 6, 2016

Subject: **Update on Sustainability Innovation Fund Project – Home Energy Labelling Pilot Project**

## RECOMMENDATION

That the GVRD Board direct staff to forward the report dated June 7, 2016, titled “Update on Sustainability Innovation Fund Project – Home Energy Labelling Pilot Project” to member jurisdictions and provide access to the RateOurHome.ca campaign materials in an effort to increase municipal involvement in the campaign.

## PURPOSE

To provide the Climate Action Committee with a progress update on the Metro Vancouver home energy labelling pilot project, funded in part by the 2015 GVRD Sustainability Innovation Fund.

## BACKGROUND

In February 2015, the Climate Action Committee received a presentation from staff on the “Home Energy Labelling Pilot Project” and in June 2015, this pilot project was awarded \$100,000 from the GVRD Sustainability Innovation Fund. This report provides an update on the project.

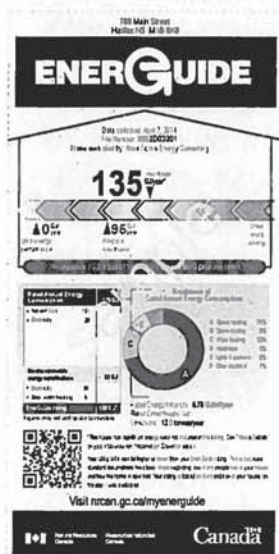


Figure 1: Sample EnerGuide label, effective April 2016.

Home energy labelling makes building energy performance ‘visible’ through validated and easy-to-understand labels, thereby allowing homebuyers to make more informed decisions. The national standard for home energy labelling is established by Natural Resources Canada (NRCAN). NRCAN registers energy advisors to perform residential energy assessments using NRCAN’s EnerGuide Rating System (ERS). The ERS can be used to assess new and existing homes, including single-family homes, duplexes, row houses, townhomes, and low-rise apartments. Following an assessment, the property is given an EnerGuide label, similar to the one shown in Figure 1.

The goal of this project is to increase both the number of homes in the region that are voluntarily labelled through the Natural Resources Canada EnerGuide rating system, and the public display of these labels.

Development of creative assets for the campaign began in fall 2015. This work was guided by a steering committee comprised of representatives from BC Hydro, City Green Solutions, FortisBC, Greater Vancouver Home Builders Association, Natural Resources Canada, Pembina Institute, Real Estate Board of Greater Vancouver, City of New Westminster, Township of Langley, BC Ministry of Energy and Mines, and BC Home Safety and Standards Branch. Through early consultation with this



steering committee and a workshop held with builders and realtors, the project direction was established as follows:

- **Increase broad awareness of home energy labeling**  
Raise general awareness in all audiences from currently low levels.
- **Wherever possible link awareness to informational resources**  
Including website, collateral materials.

Other main results:

- **Key message is home energy labelling is good value**  
It provides benefits such as comfort, peace of mind, better indoor air quality, a better performing home, reliability, home pride, etc.
- **Primary audiences are home buyers and home sellers**  
These audiences need to start asking for the label to create a demand from builders.
- **Approach is to connect the label with a genuine need**  
The goal is to sell the benefits of an energy efficient home (cost savings, comfort, peace of mind etc.), and raise awareness of the label as an informational tool at the point of sale.

#### FOCUS GROUP TESTING

Based on the direction from the Steering Committee and other stakeholders, several creative concepts were developed targeting home buyers and home sellers. In January 2016, two of the concepts were tested with focus groups, comprised of homeowners and prospective homebuyers and home sellers. The testing revealed a number of key themes and observations towards the creative concepts and messages shown:

- **Considerations when buying a home:** Personal values were a high priority when making a home purchase decision. Although the initial considerations were price, location and size, the secondary factors were focused on the quality of structure itself, including comfort. Some members of the group discussed the importance of a home inspection to avoid costly surprises, both in terms of capital and maintenance on a home.
- **Preference for creative concepts:** The focus groups were shown two creative concepts, with a focus on homebuyers and home sellers. The group readily eliminated the more complex concept of the two. They preferred a simple concept delivered in a friendly but serious tone.
- **Advertising channels:** The focus group provided input on where they would go when buying or selling a home. They emphasized the importance of online resources and also noted that realtors are an important source of information and guidance.

#### CAMPAIGN CONCEPT AND BRAND

Based on the feedback provided by the Steering Committee and focus groups, a final concept was selected (see Figure 2) for the campaign. This simple, straight-forward and clear direction introduces homebuyers and home sellers to the concept of home energy labelling and its role. It highlights the role of the label as helping “spot” or identify an energy efficient home. The copy beneath the ad describes how the label can “take the guesswork out of finding a reliable, better performing and energy efficient home” when in the market to buy, and “help your property stand out in a sea of same” when looking to sell.

#### CAMPAIGN ELEMENTS

To support these creative concepts, Metro Vancouver developed a brand for the project – RateOurHome.ca. This brand (provided as Attachment 1) will represent the website URL, which will



serve as the key resource for learning about home energy labelling. A draft showing initial content under development is shown in Attachment 2. All campaign materials will direct users to this online resource, which will serve several functions:

- Provide basic information on home energy labelling, including how to read the label and how to get a label.
- Provide audience-specific information on how home energy labelling benefits them, either as a seller, buyer, builder or realtor.
- Host an interactive, searchable map where homeowners can voluntarily display their EnerGuide labelled home.

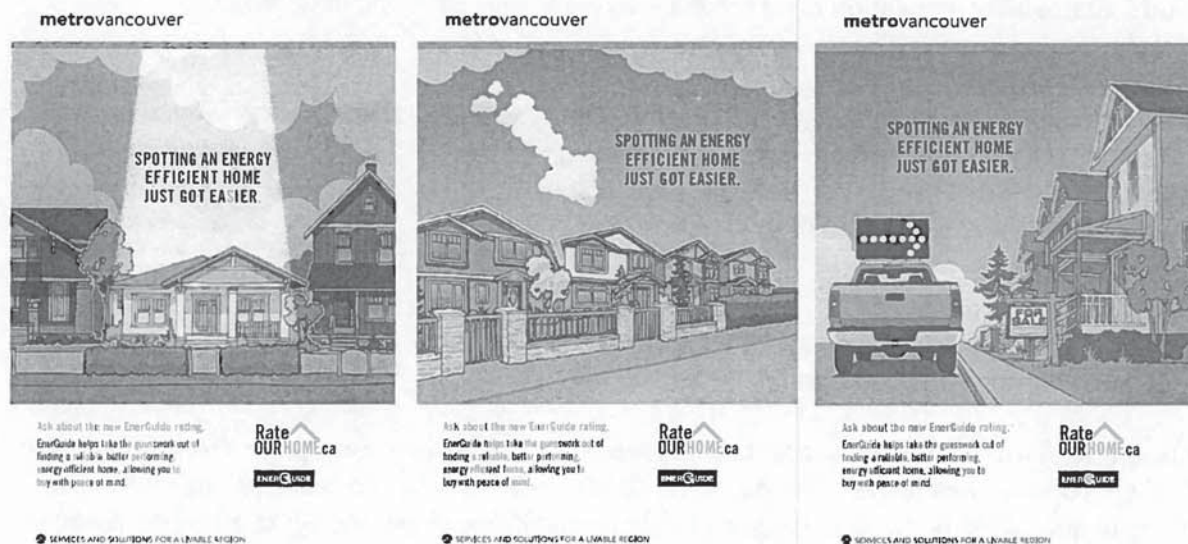


Figure 2: Print ads for the RateOurHome.ca campaign

Other campaign elements include:

- Campaign advertising (including print ads in community or real estate publications, online display ad, pre-roll video, social media paid posts, and printed collateral such as brochures and banners);
- Earned media;
- Direct engagement with local governments and utilities to integrate RateOurHome.ca disclosure with new home programs already requiring EnerGuide rating;
- Webinars, conferences and seminars for secondary audiences (realtors, builders and local government/utilities)

## PROJECT PROGRESS AND TIMELINES

The RateOurHome.ca campaign is well underway with the following steps completed and planned:

- **Complete:** Program terms, branding, logo, website, promotional videos, print collateral and forms, and waivers have been finalized.
- **July:** Recruitment of voluntarily disclosed labels and the involvement of stakeholders and member jurisdictions in the RateOurHome.ca website.
- **Aug/Sept:** Population of web map with labels through word-of-mouth outreach and direct engagement with secondary audiences.
- **Oct:** Launch of advertising campaign begins in earnest, with a budget to continue through spring 2017.



Staff intend to return to this Committee in spring 2017 with an update on the campaign, including metrics and recommendations.

#### ALTERNATIVES

1. That the GVRD Board direct staff to forward the report dated June 7, 2016, titled "Update on Sustainability Innovation Fund Project – Home Energy Labelling Pilot Project" to member jurisdictions and provide access to the RateOurHome.ca campaign materials in an effort to increase municipal involvement in the campaign.
2. That the GVRD Board receive for information the report dated June 7, 2016, titled "Update on Sustainability Innovation Fund Project – Home Energy Labelling Pilot Project".

#### FINANCIAL IMPLICATIONS

The RateOurHome.ca campaign budget is \$180,000. The 2015 GVRD Sustainability Innovation Fund supported \$100,000 of these costs with the balance funded from the approved program budgets in air quality and climate change (\$25,000 in 2015 and \$15,000 in 2016) and a grant from the Homeowners Protection Office (\$40,000).

Expenditures include:

- \$120,000 for creative design and market research; and
- \$60,000 for outreach/promotions.

A significant amount of in-kind support is provided by City Green Solutions, through a grant provided by Natural Resources Canada. City Green Solutions is an enterprising non-profit, specializing in innovative home and building energy efficiency solutions, including home evaluations and assistance with access to grants. City Green's in-kind support will provide staff time to deliver a number of the campaign elements, such as webinars and workshops targeting realtors and builders.

#### SUMMARY / CONCLUSION

The Metro Vancouver home energy labelling pilot project, now branded as the RateOurHome.ca campaign, will raise awareness of home energy labelling among homebuyers and home sellers, realtors and builders. The campaign will raise awareness of the label as an informational tool at the point of sale, connecting the label with a genuine need (such as being able to identify a home that is healthy, comfortable, and reliable) and by demonstrating that the label is good value, whether buying or selling a home. GVRD Sustainability Innovation Funding in 2015 has been used to develop a research-based and audience-tested campaign that should set the frame for a multi-year awareness campaign. The campaign is soft launching in the summer of 2016, with advertising beginning in earnest in October 2016, to coincide with the fall home-buying season. Staff recommend Alternative 1, which seeks to improve uptake of the campaign by member jurisdictions, by forwarding this report to them and providing access to campaign materials.

#### Attachments:

1. RateOurHome.ca logo
2. RateOurHome.ca draft website content

## ATTACHMENT 1: RateOurHome.ca logo



Spotting an energy efficient home just got easier.

## ATTACHMENT 2: RateOurHome.ca draft website content

métrovancouver



Ask about the new EnerGuide rating.

EnerGuide helps take the guesswork out of finding a reliable, better performing, energy efficient home; allowing you to buy with peace of mind.





Office of the Chair  
 Tel. 604 432-6215 Fax 604 451-6614

File: CR-12-01  
 Request ID: 6359  
 Ref: SD 2016 Jul 29

OCT 18 2016

Honourable Mary Polak  
 Minister of Environment  
 PO Box 9047, Stn Prov Govt  
 Victoria, BC V8W 9E2

SECTION 1 COUNCIL CORRESPONDENCE (2016.11.03)  
 City Manager  
 Deputy City Manager  
 Dir. Engineering  
 Environment Committee (Nov. 8)

Dear Minister Polak:

**Re: Metro Vancouver 2015 Construction and Demolition Waste Composition Monitoring Program**

At its July 29, 2016 regular meeting, the Board of Directors of the Greater Vancouver Sewerage and Drainage District (Metro Vancouver) adopted the following resolution:

*That the GVS&DD Board receive the report titled "Metro Vancouver 2015 Construction and Demolition Waste Composition Monitoring Program", dated July 8, 2016 for information, and send a copy to all member jurisdictions and to the provincial Ministry of Environment.*

Construction and demolition waste is targeted as a key material in Metro Vancouver's *Integrated Solid Waste and Resource Management Plan* to further increase reuse and recycling.

The enclosed report outlines Metro Vancouver municipal progress in implementing mechanisms to encourage construction and demolition waste recycling, and provides an update on construction and demolition waste composition.

If you require more information on these programs, please contact Paul Henderson, General Manager, Solid Waste Services at 604-432-6442 or [Paul.Henderson@metrovancover.org](mailto:Paul.Henderson@metrovancover.org).

Yours truly,



Greg Moore  
 Chair, Metro Vancouver Board

GM/CM/ph

cc: Metro Vancouver Member Jurisdictions

Encl: Report titled "Metro Vancouver 2015 Construction and Demolition Waste Composition Monitoring Program", dated July 8, 2016 (Doc #18891067)

19495366

4330 Kingsway, Burnaby, BC, Canada V5H 4G8 • 604-432-6200 • [www.metrovancover.org](http://www.metrovancover.org)



**metrovancouver**

SERVICES AND SOLUTIONS FOR A LIVABLE REGION

**Section E 2.1**

To: GVS&DD Board of Directors

From: Zero Waste Committee

Date: July 18, 2016

Meeting Date: July 29, 2016

Subject: **Metro Vancouver 2015 Construction and Demolition Waste Composition Monitoring Program**

---

**ZERO WASTE COMMITTEE RECOMMENDATION**

That the GVS&DD Board receive the report titled "Metro Vancouver 2015 Construction and Demolition Waste Composition Monitoring Program", dated July 8, 2016 for information, and send a copy to all member jurisdictions and to the provincial Ministry of Environment.

---

At its July 14, 2016 meeting, the Zero Waste Committee considered the attached report titled "Metro Vancouver 2015 Construction and Demolition Waste Composition Monitoring Program", dated July 8, 2016. The Committee subsequently amended the recommendation as presented above.

**Attachment:**

"Metro Vancouver 2015 Construction and Demolition Waste Composition Monitoring Program", dated July 8, 2016.

18891067

To: Zero Waste Committee

From: Marian Kim, Lead Senior Engineer, Solid Waste Services

Date: July 8, 2016 Meeting Date: July 14, 2016

Subject: **Metro Vancouver 2015 Construction and Demolition Waste Composition Monitoring Program**

---

#### RECOMMENDATION

That the GVS&DD Board receive the report titled "Metro Vancouver 2015 Construction and Demolition Waste Composition Monitoring Program", dated July 8, 2016 for information.

---

#### PURPOSE

The purpose of this report is to update the Board on the 2015 Construction and Demolition Waste Composition Monitoring Program and to provide a summary of municipal regulatory measures in place to encourage recycling of construction and demolition materials.

#### BACKGROUND

*Metro Vancouver's Integrated Solid Waste and Resource Management Plan (ISWRMP) has set ambitious regional diversion goals that rely on increased diversion in the construction and demolition (C&D) sector. ISWRMP Strategy 2.4 and 2.7 target the C&D sector and specifically wood for increased reuse and recycling. In support of these strategies, Metro Vancouver continues to monitor the region's C&D waste composition to measure progress towards the diversion goals and to better understand opportunities for further recycling in the C&D sector.*

On May 19, 2016, the Zero Waste Committee directed staff to provide:

*a summary of the various approaches taken by member municipalities in addressing the disposal of demolition materials.*

This report provides the results of the 2015 C&D Waste Composition Monitoring Program and a summary of measures implemented by municipalities to encourage C&D recycling.

#### 2015 CONSTRUCTION AND DEMOLITION WASTE COMPOSITION MONITORING PROGRAM

The 2015 C&D Waste Composition Monitoring Study titled "2015 Demolition, Land-clearing, and Construction Waste Composition Monitoring Program", available [here](#), analyzed the composition of C&D material arriving at both the Vancouver and Ecowaste landfills. The Vancouver Landfill receives C&D waste for on-site construction purposes. Ecowaste is a private landfill located in Richmond receiving C&D type wastes. One hundred and three loads were sampled from various sources including residential demolition, commercial demolition, construction, and residual materials from private C&D transfer stations and material recovery facilities. The volume of each material type was visually estimated and converted to a weight to determine an approximate overall regional composition. The field portion of this study was carried out in September and October 2015.

A comparison of the 2015 C&D waste composition monitoring results to that of the previous study in 2011 is provided in the table below.

**Table 1: Comparison of Overall Regional C&D Waste by Material Type: 2011 and 2015**

Material Category by Type	% by Weight		Annual Weight (Tonnes)	
	2011	2015	2011	2015
Wood	54%	57%	150,823	217,943
Asphalt	8%	9%	22,519	34,597
Misc. Building Materials	3%	7%	9,488	28,441
Rubble	19%	7%	52,289	27,814
Plastic	4%	6%	10,871	24,380
Metal	2%	2%	4,377	7,785
Bulky Items	<1%	2%	411	7,487
Textiles	<1%	2%	638	7,067
Miscellaneous/Black Bags	2%	2%	4,518	6,227
Land-clearing	<1%	2%	2,601	6,236
Paper	<1%	2%	341	5,868
Household Garbage	<1%	1%	1,438	5,419
Glass and Ceramics	<1%	1%	2,063	2,601
Rubber	<1%	1%	409	2,257
Masonry/Brick	1%	<1%	3,081	1,052
Concrete	5%	<1%	12,906	486
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>279,000</b>	<b>386,000</b>

#### Sources of C&D loads

C&D loads being received at the Vancouver and Ecowaste landfills were sampled for composition audit as they arrived. Of the 103 loads sampled, more than half (53) were reported to have originated from residential demolition. Of the remaining loads, roofing (12 samples), transfer station residuals (12 samples), and commercial demolition (9 samples) were the next most common sources. Other less common sources included construction, land-clearing, manufacturing, and commercial demolition. The distribution of samples is representative of the sources of loads typically received at Vancouver Landfill and Ecowaste Landfill combined.

Both Vancouver and Ecowaste Landfills receive demolition loads from across the region with Vancouver Landfill receiving primarily residential demolition loads and Ecowaste Landfill receiving a mixture of all types of loads, which is reflected in the landfill-specific composition analysis. At Vancouver Landfill, wood, a large part of which was composite, painted or treated and challenging to recycle, represented 90% of the total demolition material observed during the study. The City of Vancouver specifies the characteristics of the C&D waste received at that facility to meet its requirements for use of the material for construction purposes. At Ecowaste Landfill, wood was 41% of the material observed, with asphalt being the next highest at 13%, followed by miscellaneous materials such as carpet, underlay, insulation at 10% and rubble at 9%. Both sites accept separated loads of clean wood for recycling.

### **Wood**

Wood continues to represent the largest portion of C&D waste in the region at an estimated 218,000 tonnes (57% by weight) disposed in 2015. The primary category of wood was further separated into clean dimensional lumber, treated dimension lumber, composite wood (including plywood), shredded wood, wood flooring, and wood shakes and shingles. The majority of the wood identified was composite (20% by weight of all materials), clean dimensional lumber (14%), and painted/treated dimensional lumber (13%). Limited opportunities exist for recycling composite and painted/treated lumber, whereas clean dimensional lumber is highly recyclable. Metro Vancouver is working with the University of British Columbia on research projects that are intended to support additional options for recycling of C&D wood materials.

Metro Vancouver's Clean Wood Disposal Ban was implemented in January 2015. The ban applies to loads delivered to Metro Vancouver and City of Vancouver facilities. Large C&D loads delivered to the Vancouver Landfill used for construction purposes are not currently included in the ban. The ban has helped to raise awareness of the need to separate clean wood waste from disposal. The percentage of clean dimensional lumber in the C&D waste stream has dropped from 71,000 tonnes in 2011 to 55,000 tonnes in 2015.

The overall increase in the amount of wood in C&D waste in 2015 compared to 2011 can in part be attributed to the inclusion of out-of-region disposal tonnage in the 2015 report, which increased the total annual tonnes of wood in C&D waste by 28,000 tonnes in 2015. The remainder of the increase in wood is likely due to the increase in development activity in the region and accelerated pace of demolition of single family homes. According to the Canada Mortgage and Housing Corporation, new housing starts increased by 17% between 2011 and 2015. According to field observations, the majority of demolition wood in samples came from single family homes, especially at the Vancouver Landfill.

### **Other C&D materials**

Of the remaining material types, only asphalt (9%), miscellaneous building material such as carpet, underlay, dry, insulation, and stucco (7%), rubble (7%), and plastic (6%) were found in proportions greater than 2%. Metal, bulky items, textiles, land-clearing material, paper, household garbage, glass and ceramics, rubber, masonry and concrete collectively represented less than 15% of C&D material.

Compared to 2011, the composition of rubble showed the most dramatic decrease, from 19% in 2011 to 7% in 2015. Concrete also decreased from 5% in 2011 to <1% in 2015, a reduction of approximately 12,000 tonnes. This indicates that concrete, asphalt and rubble continue to be readily recyclable, contributing to the increase in total C&D waste recycled from 1.04 million tonnes in 2011 to 1.19 million tonnes in 2014.

The highest recycling potential exists in residential demolition projects, especially single family homes, and current regulatory measures to encourage recycling through municipal demolition permitting processes by separating recyclable materials at source play an important role in maximizing recycling.

### **Summary of Municipal Construction and Demolition Material Recycling Requirements**

The Board approved a proposed municipal permit approach to encouraging demolition material recycling in October 2012 and referred a sample municipal bylaw to member municipalities for consideration. The objective of the sample municipal bylaw is to encourage recyclable materials from

demolition sites to be reused, sorted on site, or taken as mixed loads to private transfer stations and processing facilities for recovery.

Six municipalities have adopted regulatory measures that establish recycling requirements for demolition material and others are considering adopting a regulatory program. The demolition material recycling requirements are implemented through the demolition permitting process and are based on the sample municipal bylaw, although the requirements are appropriately customized to each municipality's needs and available resources. Here is a summary of current municipal requirements related to demolition material recycling:

**Table 2: Summary of Municipal Regulatory Measures to Encourage Demolition Material Recycling**

<b>Municipality</b>	<b>Year Bylaw Effective</b>	<b>Diversion requirement</b>	<b>Reporting requirements</b>	<b>Fees associated with Demolition Material Recycling Services</b>
<b>Metro Vancouver Sample Bylaw</b>	2012 – Board referred sample bylaw to municipalities	<ul style="list-style-type: none"> <li>• Direct recyclable materials to a recycling facility</li> </ul>	<ul style="list-style-type: none"> <li>• Waste Disposal and Recycling Services Plan</li> <li>• Compliance Report</li> <li>• Receipts submitted</li> </ul>	Percent diversion used to calculate percent of Waste Disposal and Recycling Services Fee refunded
<b>City of New Westminster</b>	2016	<ul style="list-style-type: none"> <li>• 70% of demolition waste</li> </ul>	<ul style="list-style-type: none"> <li>• Recycling Plan and Compliance Report</li> <li>• Receipts submitted</li> </ul>	Waste Disposal and Recycling Services Fee includes a non-refundable administration fee, and a fully refundable Recycling Incentive Deposit of \$0.87/square foot
<b>City of North Vancouver</b>	2007	<ul style="list-style-type: none"> <li>• Recycling of specified demolition materials</li> </ul>	<ul style="list-style-type: none"> <li>• Demolition Waste Checklist</li> </ul>	No new fees or deposits introduced
<b>City of Port Moody</b>	2011	<ul style="list-style-type: none"> <li>• 70% of recyclable material</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance report</li> <li>• Receipts submitted</li> </ul>	Waste Management Fee includes a fully refundable portion of \$1,800 for a typical house (varies based on square footage).
<b>City of Richmond</b>	2016	<ul style="list-style-type: none"> <li>• 70% of demolition waste</li> </ul>	<ul style="list-style-type: none"> <li>• Recycling plan and compliance report</li> <li>• Receipts submitted</li> </ul>	Non-refundable administration fee and fully refundable Waste Disposal and Recycling Service Fee of \$2/square foot
<b>City of Vancouver</b>	2014	<ul style="list-style-type: none"> <li>• 90% from pre-1940 character homes</li> <li>• 75% from pre-1940 homes</li> </ul>	<ul style="list-style-type: none"> <li>• Recycling plan and compliance report</li> <li>• Receipts submitted</li> </ul>	Non-refundable Demolition Waste Compliance Fee plus refundable Green Demolition Deposit of \$14,650

		<ul style="list-style-type: none"> <li>Plans to transition to all one- and two-family homes by 2018</li> </ul>		
District of West Vancouver	2014	<ul style="list-style-type: none"> <li>Direct recyclable materials to a recycling facility</li> </ul>	<ul style="list-style-type: none"> <li>Notarized statutory declaration that C&amp;D waste has been recycled</li> </ul>	No new fees or deposits introduced

Metro Vancouver continues to track regional progress in implementing measures to encourage recycling in demolition projects and develop resources such as cost benefit analysis of recycling demolition materials that can support existing and future regulatory programs.

A range of other initiatives are also being pursued around the region, for instance, the City of Vancouver is investigating the potential to develop a C&D recycling facility at the Vancouver Landfill to maximize recovery of the material delivered to that facility.

#### ALTERNATIVES

This is an information report. No alternatives are presented.

#### FINANCIAL IMPLICATIONS

Ongoing work in developing resources to support regulatory measures to encourage recycling of demolition materials can be accommodated within the annual operation budget.

#### SUMMARY / CONCLUSION

Metro Vancouver continues to monitor the composition of the region's C&D waste to measure progress in achieving the region's diversion goals and to better understand opportunities for further recycling in the C&D sector. Wood continues to represent the largest portion of C&D waste in the region at an estimated annual 218,000 tonnes (57% by weight). The majority of the wood identified was composite and painted/treated dimensional lumber which are difficult to reuse and recycle. Clean dimensional lumber make up approximately 14% of the C&D waste stream, and the estimated tonnes disposed has decreased from 71,000 tonnes in 2011 to 55,000 tonnes in 2015 possibly due to raised awareness on separating clean wood waste from disposal through Metro Vancouver's Clean Wood Disposal Ban. Concrete, asphalt and rubble continue to be readily recyclable, with significant reductions in the quantity disposed since 2011. Municipal measures are important tools to increase reuse and recycling of C&D materials. A number of municipalities around the region have implemented new regulatory tools to encourage reuse and recycling of C&D materials.



## INTER-OFFICE MEMORANDUM

TO: CHAIR AND MEMBERS DATE: 2016 NOVEMBER 8  
ENVIRONMENT COMMITTEE

FROM: CITY CLERK FILE: 02410-20

SUBJECT: **FINAL ENVIRONMENTAL SUSTAINABILITY STRATEGY (ESS) AND  
FINAL COMMUNITY ENERGY AND EMISSIONS PLAN (CEEP)**  
(ITEM NO. 7(1), MANAGER'S REPORTS, COUNCIL 2016 NOVEMBER  
7)

Burnaby City Council, at the Open Council meeting held on 2016 November 7 received the above noted report and adopted the following recommendations contained therein:

1. **THAT** Council receive the results of *Phase 3 – Draft ESS* public consultation for information, as outlined in Section 3 of this report.
2. **THAT** Council approve the final *Burnaby Environmental Sustainability Strategy (ESS)* dated 2016 October 5 as outlined in Section 4 of this report.
3. **THAT** Council approve the final *Burnaby Community Energy and Emissions Plan (CEEP)* dated 2016 October 20 as outlined in Section 5 of this report.
4. **THAT** Council authorize staff to develop implementation plans to identify timelines, priorities, lead responsibility, recommended processes and/or approaches, and resources required for both the ESS and CEEP.
5. **THAT** Council authorize the Mayor to issue certificates of acknowledgement and hard copies of the ESS to all the citizen members of the ESS Steering Committee who contributed to the creation of the ESS.

.../2

*Director Planning and Building*  
*Subject: Final Environmental Sustainability Strategy*  
*(ESS) and Final Community Energy and*  
*Emissions Plan (CEEP)*  
2016 November 8 ..... Page 2

6. **THAT** Council send a copy of this report to the Environment Committee, the Planning and Development Committee, the Social Planning Committee, the Transportation Committee, and the Parks, Recreation and Culture Commission for their information.

A copy of the report is enclosed for your information.



Dennis Back  
City Clerk

DB:lc





Item .....
Meeting ..... 2016 Nov 07

## COUNCIL REPORT

---

**TO:** CITY MANAGER **DATE:** 2016 November 01

**FROM:** DIRECTOR PLANNING AND BUILDING **FILE:** 76500 20  
Ref: ESS

**SUBJECT:** FINAL ENVIRONMENTAL SUSTAINABILITY STRATEGY (ESS) AND  
FINAL COMMUNITY ENERGY AND EMISSIONS PLAN (CEEP)

**PURPOSE:** To advance the *Final Burnaby Environmental Sustainability Strategy (ESS)* and  
*Final Community Energy and Emissions Plan (CEEP)* for Council approval.

---

**RECOMMENDATIONS:**

1. **THAT** Council receive the results of *Phase 3 – Draft ESS* public consultation for information, as outlined in Section 3 of this report.
2. **THAT** Council approve the final *Burnaby Environmental Sustainability Strategy (ESS)* dated 2016 October 5<sup>1</sup> as outlined in Section 4 of this report.
3. **THAT** Council approve the final *Burnaby Community Energy and Emissions Plan (CEEP)* dated 2016 October 20<sup>2</sup> as outlined in Section 5 of this report.
4. **THAT** Council authorize staff to develop implementation plans to identify timelines, priorities, lead responsibility, recommended processes and/or approaches, and resources required for both the ESS and CEEP.
5. **THAT** Council authorize the Mayor to issue certificates of acknowledgement and hard copies of the ESS to all the citizen members of the ESS Steering Committee who contributed to the creation of the ESS.
6. **THAT** Council send a copy of this report to the Environment Committee, the Planning and Development Committee, the Social Planning Committee, the Transportation Committee, and the Parks, Recreation and Culture Commission for their information.

---

<sup>1</sup> Distributed to Council under separate cover and available for viewing at [www.burnaby.ca/ess-final](http://www.burnaby.ca/ess-final).

<sup>2</sup> Distributed to Council under separate cover and available for viewing at [www.burnaby.ca/ceep-final](http://www.burnaby.ca/ceep-final).

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 ..... Page 2

## REPORT

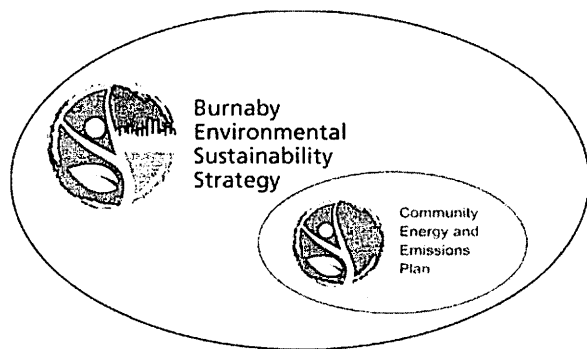
### 1.0 INTRODUCTION

The *Burnaby Environmental Sustainability Strategy* (ESS) is a plan for Burnaby's "green" future. It completes the trilogy of sustainable city policies - environmental, social and economic<sup>3</sup>, and will help to define how the city can evolve and build on its strengths to become an even more vibrant, resilient and sustainable community, integrated with healthy ecosystems.

The ESS is a city-wide policy that sets a long term vision for the City to become a leader in protecting and regenerating healthy ecosystems, and supporting a healthy and prosperous community. The ESS is intended to set directions for environmental protection, stewardship, enhancement, and resilience in the city. As a city-wide strategy it will influence many other city-wide plans, community plans, development approvals, City programs, City bylaws, City regulations, and City operations.

The 20 person ESS Steering Committee was convened in January 2013, marking the beginning of the ESS process. The Steering Committee was chaired by Mayor Derek Corrigan, included several members of Burnaby City Council, and had wide representation from the community.

The development of the ESS was supported by a three-phase public consultation process. The process was extensive, inclusive and creative and set a solid foundation of community support that will help to ensure the future success of the ESS.



**Figure 1.** The CEEP supports the ESS.

The *Burnaby Community Energy and Emissions Plan* (CEEP) was developed as a complementary and supporting plan to the ESS, as shown in **Figure 1** (left). The ESS provides a broad context and framework for sustainability, while the CEEP is a more detailed plan focused on reducing community greenhouse gas (GHG) emissions and energy use, in order to address climate change, improve local air quality, save money, and improve livability and health.

<sup>3</sup> The *Economic Development Strategy* was adopted by Council in 2007, and the *Social Sustainability Strategy* was adopted by Council in 2011.

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 ..... Page 3

Together, the ESS and supporting CEEP are being advanced on the initiative of the Mayor and Council to ensure that Burnaby will continue to show leadership in the development of exemplary sustainability programs and initiatives, guided by its integrated social, environmental and economic strategies.

The purpose of this report is to summarize the processes used to create the *Final ESS* and the *Final CEEP*; summarize the key messages received from the public input collected from the Phase 3 public consultation; highlight the changes incorporated to the *Final ESS* and the *Final CEEP*; identify the next steps for the ESS and the CEEP; and advance the *Final ESS* and *Final CEEP* for Council's consideration and approval.

## 2.0 HOW THE FINAL ESS AND THE FINAL CEEP WERE CREATED

### 2.1 The ESS Process

The ESS process, previously approved by Council at its meeting of 2011 November 7, is now complete, as shown in **Attachment 1**.

The ESS process and the creation of the *Draft ESS* were guided by the 20 member ESS Steering Committee of recognized community leaders from diverse backgrounds and interests, chaired by Mayor Corrigan and served by Councillors Dan Johnston (vice chair), Sav Dhaliwal, Colleen Jordan, and Richard Chang.

On 2013 May 13, Council approved the three phase public consultation framework for the ESS. The ESS process engaged over 2,500 people and collected over 8,000 ideas, as shown in **Figure 2** (below). The response from the public and stakeholders has been overwhelmingly positive. This input has helped to shape the *Final ESS*, and *Final CEEP*.



**Figure 2.** ESS Public Consultation Results (Phases 1, 2 and 3)

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 ..... Page 4

Led by the Mayor's ESS Steering Committee, the ESS process was one of the largest and most creative public consultation programs the City has ever undertaken. The three phases of ESS public consultation are summarized below.

- Phase 1 – *Issues and Priorities (January to July 2013)*

Phase 1 included the first phase of engagement which ran four months (May to July 2013) and focused on raising awareness, identifying key issues and opportunities, developing the vision and building interest and support.

- Phase 2 – *Exploring Further (July 2013 to January 2015)*

Phase 2 included the second phase of engagement which ran for five months (March to July 2014) and emphasized deeper and more focused feedback to inform the draft theme-based goals, strategies and suggested actions.

- Phase 3 – *Draft ESS (January 2015 to November 2016)*

Phase 3 included the third and final phase of engagement, the subject of this report, which ran for four months (March to June 2016) and involved checking in with the community regarding the proposed ESS framework contained within the *Draft ESS* to see if the recommendations match the priorities and perspectives identified in earlier phases.

The ESS timeline and the key elements of each of the three phases of the ESS process can be found in **Attachment 2**. The results of Phase 1 and Phase 2 have been previously reported to Council<sup>4</sup> and the results are available online at [www.burnaby.ca/ess-input](http://www.burnaby.ca/ess-input). Section 3 of this report summarizes the results of Phase 3.

## 2.2 The CEEP Process

The CEEP process, shown in **Attachment 3**, is also now complete. The CEEP was developed through a combination of technical work, stakeholder input and community engagement.

- Phase 1 - *Technical Work (January to July 2013)*

The first phase was to develop a rigorous science-based model, calibrated for Burnaby, that estimated today's emissions and the potential impact of different strategies to reduce emissions over time.

- Phase 2 – *Stakeholder Input (July 2013 to July 2015)*

---

<sup>4</sup> Results from Phases 1 and 2 public consultation can be found in the Council report #5 dated 2014 March 4 (Phase 1) and Council report #8 dated 2016 March 7 (Phase 2) and in the public summary reports available at [www.burnaby.ca/ess-report-B](http://www.burnaby.ca/ess-report-B) (Phase 1) and [www.burnaby.ca/ess-report-C](http://www.burnaby.ca/ess-report-C) (Phase 2).

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 ..... Page 5

The second phase included meetings with the CEEP Steering Committee (consisting of City staff and representatives from key partner agencies), and workshops with the ESS Steering Committee and community stakeholders. Public input on a number of CEEP related ESS goals, including *Breathe, Live, Build, Move, Conserve, and Manage*, was collected during ESS Phase 2.

- Phase 3 – *Community Engagement (July 2015 to June 2016)*

Phase 3 included sharing the draft strategies and targets with the public as part of the ESS Phase 3 public consultation, which ran for four months (March to June 2016).

This approach allowed participants to understand the impacts of various strategies, to provide input into choosing desirable and feasible strategies, and to have confidence that the target chosen will be achievable.

The CEEP was developed through a parallel process to the ESS, and its draft recommendations were integrated into the ESS to address climate change and to complement other goals for community health and livability.

### 3.0 PHASE 3 PUBLIC CONSULTATION

Phase 3 shared the *Draft ESS* and the supporting *Draft CEEP* with the broader community to check in to make sure we were ‘headed in the right direction’ before they were submitted to Council for approval. Phase 3 offered a great opportunity to share the *Draft CEEP* with the broader community in concert with the *Draft ESS* and helped the *Draft CEEP* reach a wider audience.

#### 3.1 The Draft ESS

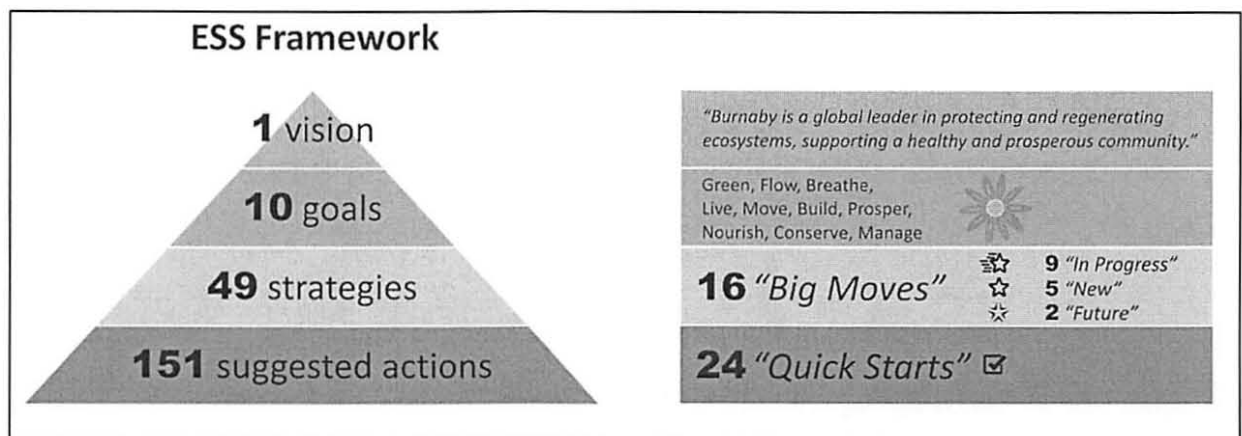


Figure 3. Draft ESS Framework

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 ..... Page 6

The framework contained within the *Draft ESS* had four layers, with each level being supported by more detail in the level below, as shown in **Figure 3** (previous page), Moving from the highest level to the most detailed level: there was one vision, 10 goals, 49 strategies and 151 suggested actions.

### 3.2 The Draft CEEP

Phase 3 also shared the *Draft CEEP*, a separate but supporting strategy for the ESS. The *Draft CEEP* consisted of GHG reduction targets and supporting strategies in four sectors, was shared with the public alongside the *Draft ESS*.

The *Draft ESS* and the *Draft CEEP*, as shared with the broader community during Phase 3, event details and the supporting public consultation material can all be viewed at [www.burnaby.ca/ess-input](http://www.burnaby.ca/ess-input).<sup>5</sup>

### 3.3 Phase 3 ESS Objectives

The objectives for the *Draft ESS* public consultation in Phase 3 were to:

- Celebrate the process to date (extensive consultation, collaborative effort, culmination of ‘good work’).
- Share the *Draft ESS* including a framework (vision, goals, strategies and suggested actions) and priorities (“*Big Moves*” and “*Quick Starts*”).
- Confirm that the *Draft ESS* is on the right track, or make corrections if needed.

### 3.4 Phase 3 CEEP Objectives

The objectives for the *Draft CEEP* consultation, undertaken in Phase 3, were to:

- Introduce the CEEP.
- Seek public feedback on the draft strategies in four sectors (buildings, district energy, transportation and solid waste).
- Confirm that the draft approach, targets, and strategies are on the right track, or make corrections if needed.

### 3.5 Phase 3 - Two Streams

To achieve these objectives, Phase 3 had two streams – *awareness* and *engagement*.

<sup>5</sup> The Draft ESS Report will continue to be posted during the month of November so those who participated in Phase 3 can see the changes made to the Final ESS. Once Council approves this report staff will replace both the Draft ESS and the Final ESS with the Adopted ESS.

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 ..... Page 7

**Awareness** focused on communicating about the *Draft ESS* and *Draft CEEP*, and promoting the opportunity to provide feedback, including face-to-face conversations at public events, presentations, website material, social media and peer-to-peer networking.

**Engagement** involved obtaining formal responses from the public and stakeholders, from activities and small group discussions at workshops and public events, and from online questionnaires and written comments.

The *Draft ESS* and *Draft CEEP* were shared with the community at 16 events including six public community events and 10 stakeholder events. A range of methods was used to engage a broad spectrum of the public, including interactive activities, display boards, handouts, and online questionnaires. The events took place at a variety of locations across the city, and were attended by people of a variety of ages, demographics and cultural backgrounds. Both the *Draft ESS* and *Draft CEEP* were profiled at 11 events and the remaining five events focused on one project or the other.

A full list of events and activities undertaken at each can be viewed in the Phase 3 summary report that has been distributed to Council under separate cover and is available for viewing at [www.burnaby.ca/ess-report-D](http://www.burnaby.ca/ess-report-D).

### 3.6 Phase 3 - Key Messages

The following were the key messages received from public feedback on the *Draft ESS* and *Draft CEEP*.

#### 3.6.1 Overall – ESS and CEEP

- Overall, the engagement was positively received, with a high response rate and strong interest at the 16 events attended.
- Over 5,600 people were made aware of the *Draft ESS/Draft CEEP* and over 580 people provided feedback.
- Over 350 online questionnaires were completed.
- Over 1,200 ideas were collected from the public in total, with a high number of comments expressing general support and/or specific reasons for supporting the two plans.
- The input collected from Phase 3 was used to create the *Final ESS* and the *Final CEEP*.

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 ..... Page 8

### 3.6.2 Draft ESS

Results of the *Draft ESS* consultation showed:

- 17% of people engaged had previously been involved in the ESS process and 83% were new to the ESS process.
- All 10 draft ESS goals had a significant level of interest (number of responses) and there was relatively little spread between each of the goals, when ordered from highest “Move” to lowest “Prosper”.
- There was a high level of support (ranging from 87% to 99% support) for each of the 10 draft ESS goals and 49 draft ESS strategies.
- Specific priorities in the ESS comments included protection of greenspace, improving walkability and bike-ability, and recycling and waste reduction (with all three of these and many others having linkages to the CEEP as well as the ESS).
- The majority of the ESS comments showed a high level of comfort with the “goals” and “strategies” contained within the *Draft ESS*.
- Of those comments that suggested making changes to the *Draft ESS* most related to the “suggested actions” level of the framework.

As a result, the public input from Phase 3 confirmed the *Draft ESS* is heading in the right direction overall and only modest changes were needed, with the majority being made to “suggested actions” in the *Final ESS*. Other changes to the body of the report included small wording changes and new information about Phase 3 to reflect the advancement of the report to its current “Final” state. All changes to the *Final ESS* are shown in yellow highlight on 2016 October 5<sup>th</sup> edition of the *Final ESS* (circulated to Council under separate cover and available for viewing at [www.burnaby.ca/ess-final](http://www.burnaby.ca/ess-final)). The changes are also summarized in **Attachment 4**.

### 3.6.3 Draft CEEP

Results of the *Draft CEEP* consultation showed:

- Engagement on the CEEP was more modest than for the ESS. This was anticipated, as the CEEP is more technical, narrower in scope and more focused on energy and emissions than the ESS.
- 94% of people responding said they were “very” or “somewhat” well informed about climate change.
- Even with this high level of awareness, 53% said they learned something new about Burnaby’s emission and 34% said they learned something new about the



To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 ..... Page 9

challenges Burnaby is facing. This suggests that continuing to provide information about Burnaby's existing conditions and challenges should be an important component of the CEEP going forward.

- 80% of people responding said they would support the unique approach proposed of setting two targets – “City Only” and “City plus Others.”
- People responded positively to the level of the targets (64% support for the “City Only” and 82% for the “City plus Others”) even if they had concerns that it did not go far enough.
- Many wide ranging discussions were held about the different and conflicting considerations in setting targets. Some people acknowledged the need for strong action, while others recognized the challenges of getting all levels of government to take coordinated action and getting people to change their behaviour.
- Overall, there was a very high level of support for the draft CEEP strategies (ranging from 74% to 100% support).
- As a result of the input collected, some changes were made to the *Final CEEP* such as using the ESS themes of *Live, Move, Build, Conserve*, and *Manage* to better align with and support the ESS.

The detailed summary of the public feedback received during Phase 3 public consultation can be found at [www.burnaby.ca/ess-report-D](http://www.burnaby.ca/ess-report-D).

#### 4.0 THE FINAL ESS

The *Final ESS* dated 2016 October 5 has been distributed to Council under separate cover and is available for viewing at [www.burnaby.ca/ess-final](http://www.burnaby.ca/ess-final).

#### 4.1 Key Principles

The ESS is based on a number of key guiding principles and core concepts. Central to these is the acknowledgement that people and human society are not separate from “nature” and the environment; rather, we are part of and *depend on healthy ecosystems for all our core survival needs, health and economic prosperity*. Therefore, from a societal point of view, there is a strong case for including more nature within the urban fabric of cities, and moving beyond reducing negative impacts, toward development practices that restore healthy ecosystems.

Burnaby's strong record of environmental protection, for example preserving open streams and protecting over 25% of its land base as greenspace, make it an ideal place to showcase truly leading approaches that demonstrate these principles. By also incorporating the latest new

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 ..... Page 10

technologies and approaches for the built environment, such as ultra-efficient building designs, a “regenerative” approach to planning and development is envisioned by the ESS.

Another of Burnaby’s strengths is *the dedication and creativity of its citizens*. Throughout the consultation process, the commitment and leadership of people and businesses in the community, and within the City and partner organizations, was revealed through comments to online questionnaires, in workshops, and in many individual conversations. Building on this strength and working collaboratively, including with organizations such as the business community, BCIT and SFU, and community organizations, will be essential to successfully putting the ESS into action. The opportunity to build on this strength is reflected in the prominent themes of collaboration, partnerships, communication and education included throughout the ESS.

## 4.2 Design and Layout

The *Final ESS* is presented to encourage people to be able to find as much information as they want quickly on areas that are of interest to them. The *Final ESS* is 40 pages designed to be engaging and easy to read. The report appendices contain another 26 pages of more detailed information and there are another six supporting reports available online that provide even more detailed information. This encourages readers to explore and discover material that is at the right level for their particular interest.

The heart of the ESS is “*The ESS framework*.” This section contains the vision, goals, strategies and suggested actions for the ESS, as described in Section 4.3 of this report. It also contains some priority strategies called “*Big Moves*” and priority suggested actions called “*Quick Starts*.”

## 4.3 The ESS Framework

The framework contained within the *Final ESS* represents the heart of the document. It was created based on the input of all three phases of the ESS process. The framework is intended to provide clear direction on the areas that are priorities for City action. The *Final ESS* framework has four layers, with each level being supported by more detail in the level below. Moving from the highest level to the most detailed level: there was one vision, 10 goals, 49 strategies and 155 suggested actions.

### 4.3.1 Vision

The purpose of the vision is to express a common direction for the City’s environmental future to help align decisions and actions so that the community can collectively move toward this shared vision. The draft vision for the ESS was developed with significant input from the public and the ESS Steering Committee.

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 .....Page 11

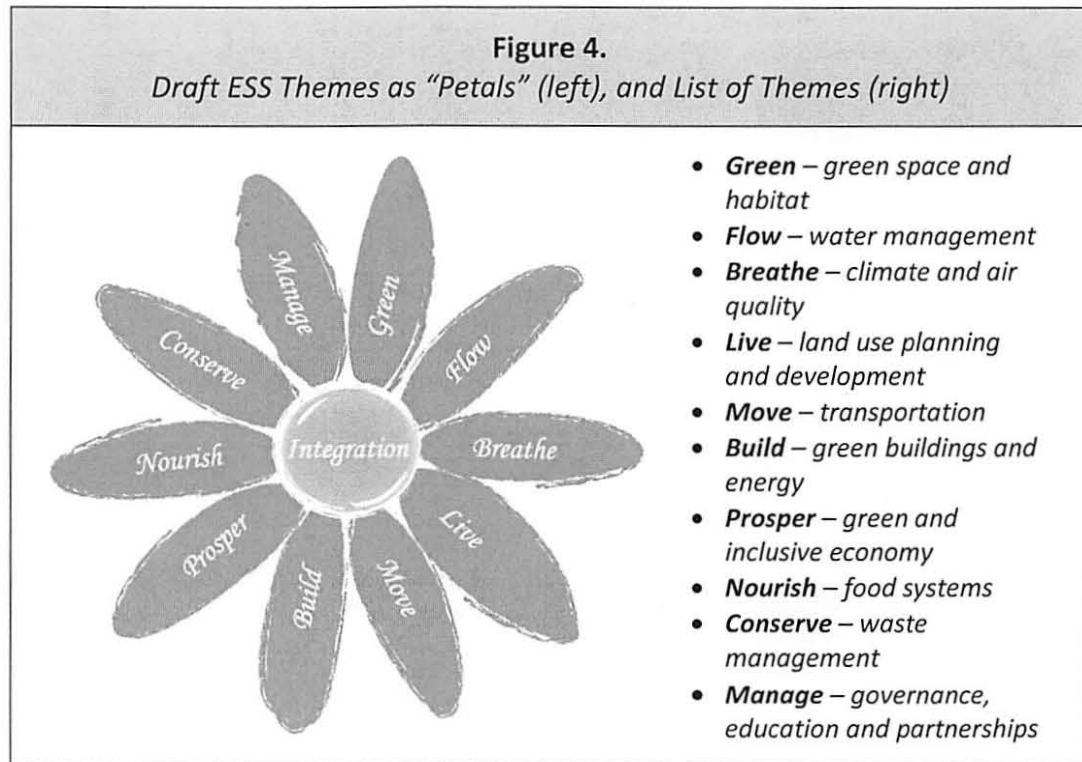
**A vision for Burnaby's Future:**

*"Burnaby is a global leader in protecting and regenerating ecosystems, supporting a healthy and prosperous community."*

The *Final ESS* also contains a longer 'narrative' of the vision that is intended to evoke the imagination.

#### 4.3.2 ESS Theme-Based Goals

Burnaby's *Final ESS* is structured around 10 themes, represented as petals of a flower, as shown in **Figure 4** (below), to support the draft vision for the ESS. A goal statement accompanies each theme.



#### 4.3.3 Strategies and "Big Moves"

Among the 49 ESS strategies, 16 have been identified as "*Big Moves*," which represent significant opportunities and thus higher priority in the plan.

Three types of "*Big Moves*" are identified:

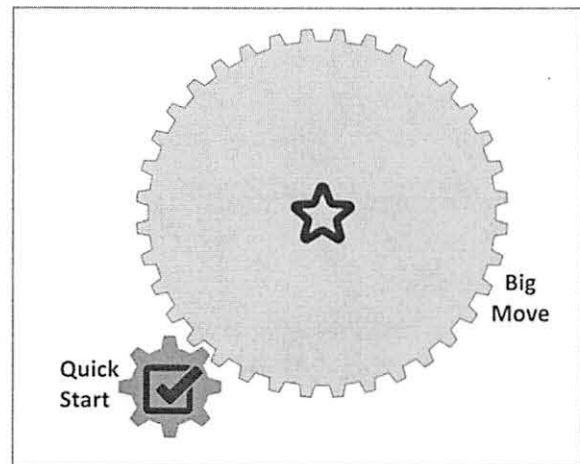
To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 .....Page 12

- ***In Progress (9 strategies)*** – “*Big Moves*” that acknowledge and build on what we are already doing; lend strength and focus to our existing efforts; link to work in progress; and help guide, shape and improve what we are doing now.
- ***New (5 strategies)*** – “*Big Moves*” that introduce new areas of work (policies, programs, other actions) and highlight these as priorities for Council's consideration.
- ***Future (2 strategies)*** – “*Big Moves*” that acknowledge anticipated future work (likely policy work); and lend strength and focus to future work.

It is proposed that Council's approval of the ESS would be considered as “approval in principle” for staff to begin preliminary work in these areas. Specific recommendations for new or updated policy in these areas would be subject to further study and approval by Council.

#### 4.3.4 Actions and “Quick Starts”

Each of the strategies is supported by a number of suggested actions, 155 in all. In addition to the 155 suggested actions, there are 25 “*Quick Starts*”. For every “*Big Move*” there is a supporting “*Quick Start*” to get things moving, as shown in **Figure 5** (right). “*Quick Starts*” are proposed City actions that take advantage of short term opportunities, build momentum and demonstrate commitment to the ESS.



**Figure 5.** “*Quick Starts*” and “*Big Moves*”

With Council adoption of the *Final ESS* staff would begin to pursue these “*Quick Starts*” as a first wave of ESS activity, as resources permit.

## 5.0 THE FINAL CEEP

Under the leadership of Burnaby Council, the City took advantage of a unique opportunity to develop a CEEP in support of the ESS process. The CEEP process, previously approved by Council at its meeting of 2011 November 7, was designed to create a more detailed plan focused on reducing community greenhouse gas (GHG) emissions and energy use.

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 .....Page 13

Burnaby's *Final CEEP* is a plan to reduce the community's overall energy use and greenhouse gas (GHG) emissions, in order to address climate change, improve local air quality, save money, and improve livability and health. The *Final CEEP* supports many of the goals of the ESS, as well as the *Economic* and *Social* sustainability strategies.

The *Final CEEP*:

- includes targets for GHG reduction along with goals, strategies and actions;
- is a key deliverable of the ESS goal *Breathe*; and
- shares and supports five other ESS goals: *Live, Move, Build, Conserve* and *Manage*.

The *Final CEEP* dated 2016 October 6 has been distributed to Council under separate cover and is available for viewing at [www.burnaby.ca/ceep-final](http://www.burnaby.ca/ceep-final).

## 5.1 Design and Layout

The *Final CEEP* is a community facing document that is based on the set of CEEP strategies and actions as presented to the public during Phase 3. The material shared during public consultation and contained within the *Final CEEP* is based on the detailed analysis undertaken in Phase 1 and Phase 2 of the CEEP process (as described in Section 2.2 of this report). Some changes were made to the CEEP material that was presented to the public in the *Final CEEP*, like using the ESS themes of *Live, Move, Conserve* and *Manage*, to better align with and support the ESS.

Other changes to the *Final CEEP* reflect its evolution to a full framework which includes sharing a number of key elements with the ESS, and CEEP-specific content, derived from the technical work, public consultation and stakeholder input. The revised CEEP structure is further explained below.

The design and layout of the *Final CEEP* followed a similar format to that of the *Final ESS* and is also designed to encourage people to be able to find as much information as they want quickly on areas that are of interest to them. The *Final CEEP* is 31 pages designed to be engaging and easy to read. The *Final CEEP* has three supporting reports available online that provide even more detailed information (one of which is the ESS).

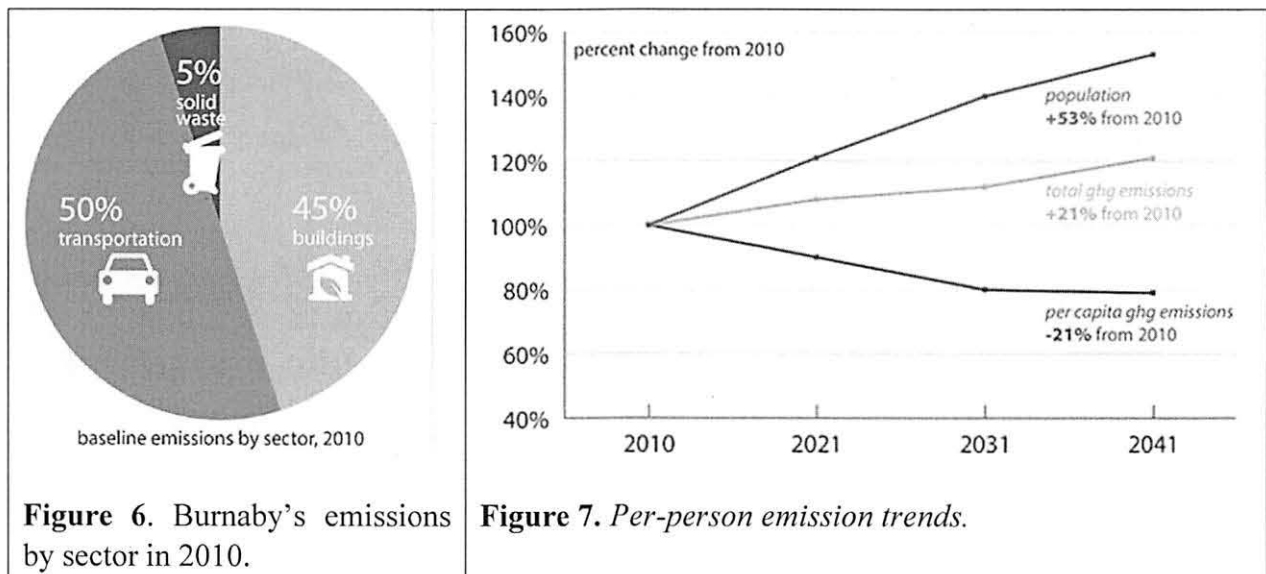
The heart of the *Final CEEP* is the "*CEEP Strategies and Actions*". This section contains goals, strategies and suggested actions for the five areas of action within the CEEP – *Live, Move, Build, Conserve* and *Manage*. Similar to the ESS, it also contains some priority strategies called "*Big Moves*" and priority suggested actions called "*Quick Starts*".

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 .....Page 14

## 5.2 Burnaby Today and the Challenge Ahead

Burnaby has already made great progress in wise energy use and emissions management, like using compact land uses around SkyTrain stations. Burnaby currently has one of the lowest emission rates per person in the province (4.3 tonnes per person), well below the BC average (5.0 tonnes per person).

Today, Burnaby's emissions are generated from transportation, buildings, and solid waste, as shown in **Figure 6** (below). If no action is taken, today's emissions are projected to rise by 21% by 2041, as population grows, as shown in **Figure 7** (below).



Burnaby's challenge is to reduce community emissions, even as our population grows (over 50% by 2041 as shown by the top line in **Figure 7**, above). Even with each person forecast to produce fewer emissions in the future (a reduction of more than 20% by 2041 as shown by the bottom line), the City's total emissions are estimated to increase by over 20% by 2041 (as shown by the middle line).

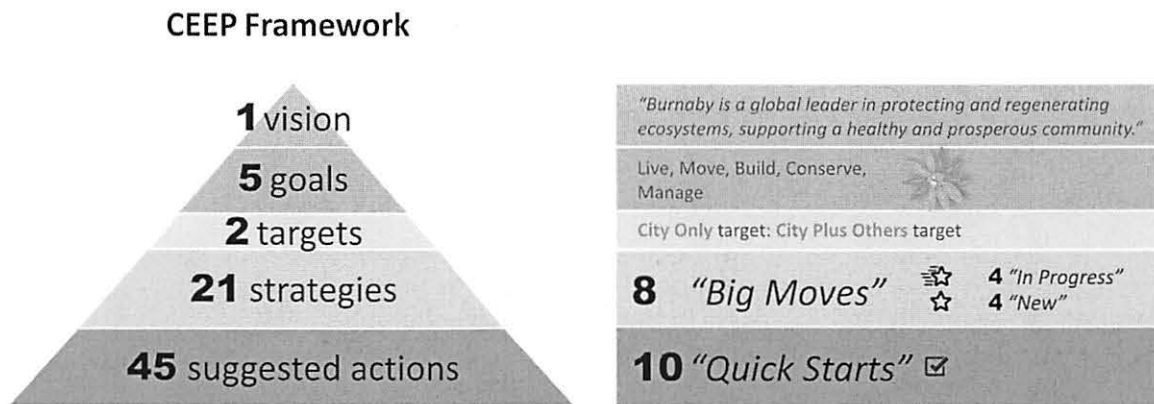
Burnaby faces several challenges in reducing total community emissions over time, which require careful consideration:

- Significant population growth (120,000 more people by 2041) as shown by the top line in **Figure 7** (previous page).
- Limited control of several key ways to reduce energy and emissions, such as improving transit service and vehicle efficiency standards.
- Limited local government resources, both human and financial.

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 .....Page 15

### 5.3 The CEEP Framework

As shown in **Figure 8** (below), in order to more efficiently and clearly link the *Final CEEP* with the *Final ESS*, the original CEEP framework (consisting of two city-wide ‘themes’ and four ‘sectors’), was adjusted to align with the ESS goals of *Live, Move, Build, Conserve* and *Manage*. Although not included within the CEEP, the ESS goal of *Breathe* provides context and references development of the CEEP itself.



**Figure 8. CEEP Framework**

In order to ensure the CEEP is closely aligned with the ESS, it shares the vision, five goals, 8 "Big Moves" and 10 "Quick Starts" with the ESS. The two targets ("City Only" and "City Plus Others"), 13 CEEP Strategies and 45 Suggested Actions are all unique to the CEEP.

### 5.4 The Unique Approach to the CEEP Targets

Reducing energy use and emissions is a shared responsibility and requires effort from the federal and provincial governments, regional organizations like TransLink, the business community, the City of Burnaby and citizens. The CEEP is a plan for the community (City, residents, businesses, and other agencies) to all take action.

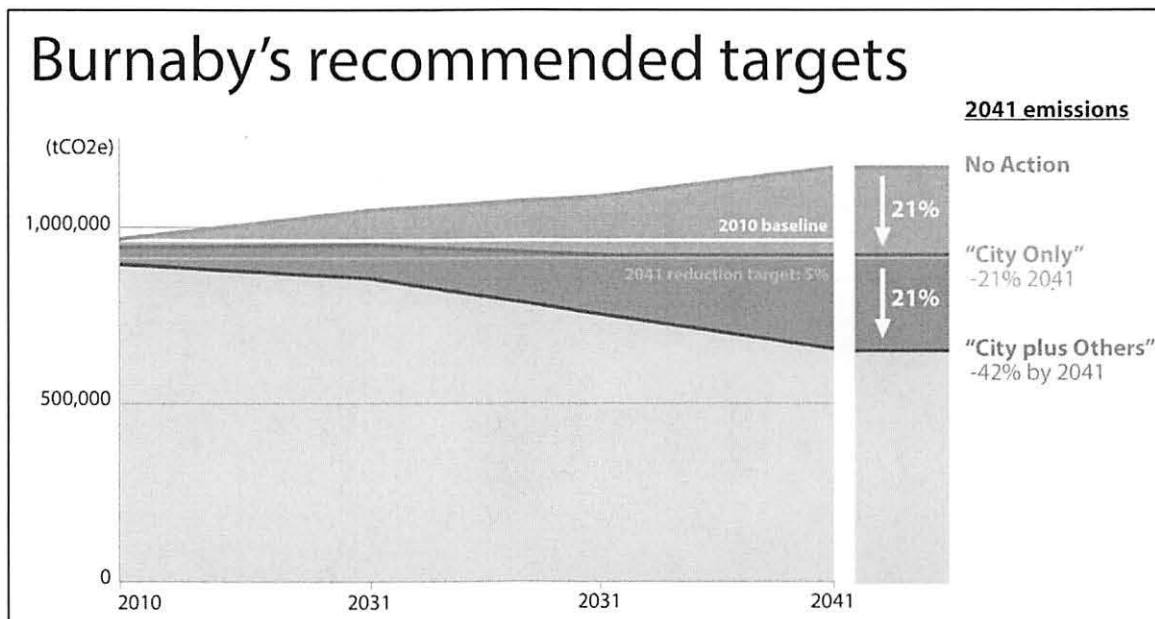
Burnaby's approach of setting two targets is unique. A "City Only" target and a further "City Plus Others" target makes it clear how both the City and others can take action.

The "City Only" target was determined by assessing jurisdiction: who can do what. The City also considered Burnaby's ability to implement and deliver, resulting in an achievable target with feasible objectives and actions.

The primary "City Only" target, in areas the City has control over, is a 5% reduction in 2010 baseline emissions by 2041. This may sound like a 'small' target but it means that, by 2041, projected emissions will be reduced by over 20% or 249,000 tonnes when compared to the future

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 .....Page 16

trend if no action was taken at all. This is a big reduction and is shown on the right side of the top band of the 'wedge' in **Figure 9** (below) and **Table 1** (below).



**Figure 9.** Burnaby's recommended targets

**Table 1.** 2041 Emission Reduction Targets

	<b>Below 2010</b>	<b>Total Reduction 2041</b>	<b>Total Tonnes Reduced</b>
<b>City Only</b>	-5%	-21%	249,000
<b>City Plus Others</b>	-29%	-42%	485,000

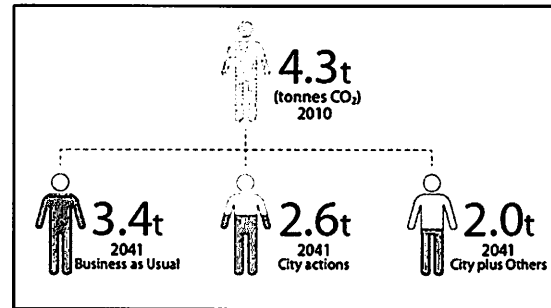
A second target, "City Plus Others," shows how much emissions could be reduced if other agencies also took action alongside the City. The "City Plus Others" target shows that with this cooperation we could reduce community emissions by over 40% in total or 485,000 tonnes by 2041 compared to if no action were taken. This second part of the reduction is shown on the right side of the second band of the 'wedge' in **Figure 9** (above) and **Table 1** (above).

Each of these targets would contribute about equally to a projected GHG reduction by the year 2041.



To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 .....Page 17

The CEEP also includes per-person targets, as shown in **Figure 10** (right). Burnaby's 2010 per-person emissions of 4.3 tonnes (t) per year are expected to decrease slightly under "Business as Usual" (if no other action was taken), to 3.4t by 2041. The "City Only" per-person target is 2.6t per person by 2041 and the "City Plus Others" per-person target is 2.0t by 2041.



**Figure 10.** Burnaby's per-person targets

### 5.5 A Strategic Approach – Five Areas for Action

The "City Only" target focuses on five areas for action, each including an ESS goal, supporting CEEP strategies and CEEP suggested actions. These five areas of action are:

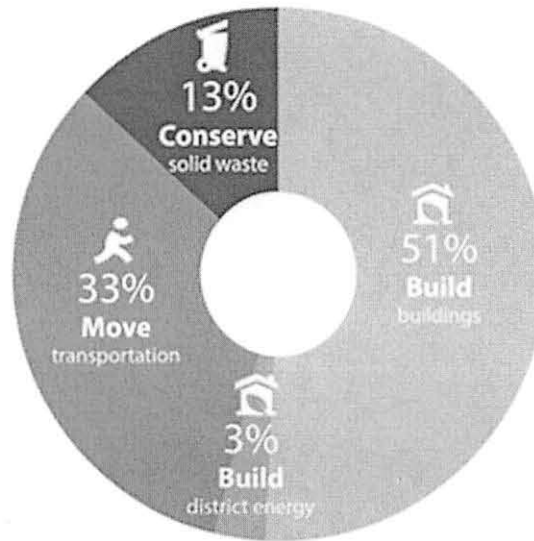
- *Live* – Land use planning and development
- *Move* – Transportation
- *Build* – Buildings and energy
- *Conserve* – Waste management
- *Manage* – Governance, education and partnerships

*Live* (listed first) and *Manage* (listed last) provide the framework or structure that lets us achieve results in the other three areas of action - *Move*, *Build* and *Conserve*.

*Move*, *Build* and *Conserve* provide most of the detailed strategies and suggested actions as well as provide most of the estimated emission reductions, as shown in **Figure 11** (next page).

- Improving how we *Build* is Burnaby's biggest opportunity for reducing greenhouse gas emissions and is 51% of the "City Only" target. Using District Energy to heat buildings in a few key locations could result in an additional 3% of the "City Only" target.
- Changing how we *Move* could result in over a third of our proposed emission reductions or 33% of the "City Only" target.
- Increasing how much we *Conserve* is something we need to tackle together as a region, but there are also steps Burnaby can take to reduce our emissions. Reducing our emissions from solid waste helps us to achieve 13% of the "City Only" target.

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 .....Page 18



**Figure 11.** Percentage of the “City Only” target by goal

Note: Live and Manage were not modeled directly.

It is estimated that the total net cost to the community (all of us in total - residents, businesses, the City and others) of the proposed “City Only” target would be a savings of \$1 for every tonne of GHGs we reduce. Cost savings in some areas like more energy efficient buildings and reduced travel would offset costs in other areas like district energy, vehicle electrification, and waste.

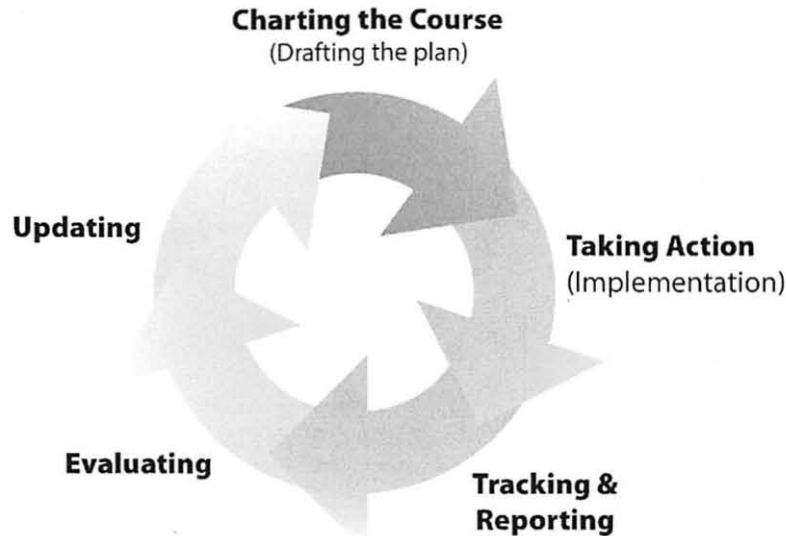
## 6.0 NEXT STEPS

The ESS is intended to provide a clear but flexible framework, to guide staff across the organization in the development of new policies, programs and regulations, or as a basis for advocacy and partnership with external organizations. It will also inform the development of other City strategic plans and policies, such as updates to the *Official Community Plan* and *Transportation Plan*.

The *Final CEEP* sets direction and outlines targets and priorities for the City to reduce GHG emissions and energy use across the community, complementing many other sustainability goals and supporting the overall ESS vision.

The ESS and the CEEP will both be put into action through an iterative approach of charting the course, taking action, tracking and reporting, evaluating and updating, as shown for the ESS in **Figure 12**, next page.

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 .....Page 19



**Figure 12.** *The iterative approach*

This report recommends that Council authorize staff to develop an ESS implementation plan that would follow Council approval of the *Final ESS*. The ESS implementation plan would include the ESS's "*Quick Starts*" and "*Big Moves*", would prioritize them, identify further steps that need to be taken to implement them, and identify resources.

Following Council's adoption of the ESS, staff would develop a public launch program that will encourage both residents and businesses to take action to support the 10 ESS goals.

This report also recommends that Council authorize staff to develop a CEEP implementation plan. As with the ESS implementation plan, the CEEP implementation plan would include the CEEP's "*Quick Starts*" and "*Big Moves*", would prioritize them, identify further steps that need to be taken to implement them, and identify resources.

Following Council adoption of the CEEP, staff will advance an Official Community Plan (OCP) amendment for Council's consideration. This OCP amendment will propose replacing the existing 'interim' community greenhouse gas reduction (GHG) target of 5% below 2007 levels<sup>6</sup> with a new primary "*City Only*" target of 5% reduction in 2010 baseline emissions by 2041, as described in Section 5.3 of this report. The CEEP also identifies a significant increase as the secondary "*City Plus Others*" target has the potential to go well beyond the interim target to achieve 29% reduction in 2010 baseline emissions by 2041.

<sup>6</sup> On 2010 May 3, Council adopted an 'interim' community greenhouse gas reduction (GHG) target of five percent (5%) below 2007 levels in order to meet the requirements of provincial *Local Government (Green Communities) Statutes Amendment Act, 2008 (Bill 27)*, with the provision that more detailed and likely farther reaching targets would be developed through a GHG reduction strategy. The completion of the CEEP now fulfills that previous commitment.

To: City Manager  
 From: Director Planning and Building  
 Re: Final Environmental Sustainability Strategy (ESS) and  
 Final Community Energy and Emissions Plan (CEEP)  
 2016 Nov 01 ..... Page 20

## 7.0 CONCLUSION

This report marks the completion of one of the City's most extensive, inclusive and creative public consultation efforts to date, which has engaged thousands of individual citizens and many businesses and stakeholder groups over a multi-year process. The response from the public has been overwhelmingly positive and constructive, and input received through this process has informed development of the *Final ESS* and *Final CEEP*.

On this basis, it is recommended that Council:

- receive the results of *Phase 3 – Draft ESS* public consultation for information, as outlined in Section 3 of this report; approve the final *Burnaby Environmental Sustainability Strategy* (ESS) dated 2016 October 5 as outlined in Section 4 of this report;
- approve the final Burnaby Community Energy and Emissions Plan (CEEP) dated 2016 October 20 as outlined in Section 5 of this report;
- authorize staff to develop implementation plans to identify timelines, priorities, lead responsibility, recommended processes and/or approaches, and resources required for both the ESS and CEEP;
- authorize the Mayor to issue certificates of acknowledgement and hard copies of the ESS to all the citizen members of the ESS Steering Committee who contributed to the creation of the ESS; and,
- send a copy of this report to the Environment Committee, the Planning and Development Committee, the Social Planning Committee, the Transportation Committee, and the Parks, Recreation and Culture Commission for their information.

  
 Lou Pelletier, Director  
 PLANNING AND BUILDING

DAC/LT:sla  
*Attachments*

cc: Deputy City Manager  
 Director Finance  
 Director Engineering  
 Director Parks Recreation and Cultural Services  
 City Solicitor  
 City Clerk

P:\Environmental Sustainability Strategy\Council reports\No. 9 - 2016 Nov 7 - Final ESS\ESS Council Report No 9 - final ESS 2016.11.07.docx

## Attachment 1: Steps of the ESS Process

Timeline	Inputs	Step	Outputs	Council Reports
	<ul style="list-style-type: none"> <li>'Community Dialogue' approach</li> <li>Council input</li> </ul>	<b>1</b> Set Approach	<ul style="list-style-type: none"> <li>funding approved</li> <li>'Community Dialogue' approach approved</li> </ul>	← Council Report 1
	<ul style="list-style-type: none"> <li>work plan details</li> <li>resources required</li> <li>Steering Committee terms of reference (TOR)</li> </ul>	<b>2</b> Confirm Process	<ul style="list-style-type: none"> <li>project team assembled</li> <li>process updated</li> <li>Steering Committee TOR approved</li> </ul>	← Council Report 2
	<ul style="list-style-type: none"> <li>consultant terms of reference</li> <li>consultant proposals</li> </ul>	<b>3</b> Hire Consultant	<ul style="list-style-type: none"> <li>consultant retained</li> <li>work plan confirmed</li> </ul>	
	<ul style="list-style-type: none"> <li>potential Steering Committee members</li> <li>invitations from Mayor</li> </ul>	<b>4</b> Assemble Steering Committee	<ul style="list-style-type: none"> <li><u>Draft Environmental Context Report (what we are doing)</u></li> <li>Steering Committee assembled and approved</li> </ul>	← Council Report 3
	<ul style="list-style-type: none"> <li><u>Discussion Paper No. 1a: Burnaby's Environmental Achievements</u></li> <li><u>Discussion Paper No. 1b: What is Sustainability</u> <ul style="list-style-type: none"> <li>Burnaby's environmental policies</li> <li>best practices by others</li> <li>key challenges / opportunities</li> </ul> </li> </ul>	<b>5</b> Take Stock	<ul style="list-style-type: none"> <li><u>opportunities and challenges</u></li> <li>Steering Committee meeting No. 1 (orientation)</li> </ul>	
	<ul style="list-style-type: none"> <li><u>Draft Environmental Context Report (what we are doing)</u></li> <li><u>Cases Studies (what others are doing)</u></li> <li><u>Discussion Paper No. 2: Guiding Principles</u></li> </ul>	<b>6</b> Set Guiding Principles & Draft Subject Areas	<ul style="list-style-type: none"> <li>Steering Committee meeting No. 2</li> <li><u>draft guiding principles</u></li> <li><u>draft subject areas</u></li> <li>public consultation strategies</li> <li>suggestions for sub-committee members</li> </ul>	
	<ul style="list-style-type: none"> <li><u>research tools and logistics</u></li> <li>draft consultation plan (phase 1)</li> </ul>	<b>7</b> Draft Community Consultation Plan	<ul style="list-style-type: none"> <li>approved consultation plan (phase 1)</li> </ul>	
	<ul style="list-style-type: none"> <li>public process kick-off event</li> <li>info on existing policies, programs and initiatives</li> <li>draft guiding principles</li> <li>draft subject areas</li> </ul>	<b>8</b> Outreach Phase 1	<ul style="list-style-type: none"> <li><u>Summary Report</u> <ul style="list-style-type: none"> <li>successes acknowledged</li> <li>comments on guiding principles</li> <li>areas for more work</li> <li>emerging issues</li> <li>draft subject areas</li> </ul> </li> </ul>	
	<ul style="list-style-type: none"> <li>public input (Phase 1)</li> <li><u>Discussion Paper No. 3: Vision</u></li> <li>Keynote speaker at ESS SC Mtg No. 3</li> <li><u>Discussion Paper No. 4: Phase 1 Public Consultation</u></li> </ul>	<b>9</b> Confirm the Subject Areas	<ul style="list-style-type: none"> <li>Steering Committee meeting No. 3 (draft vision)</li> <li>draft vision statement</li> <li>Steering Committee meeting No. 4 (CEEP)</li> <li>confirmed subject areas</li> <li>integration with CEEP</li> <li>comments on draft vision statement</li> </ul>	
	<ul style="list-style-type: none"> <li><u>Sub-committee terms of reference</u></li> <li>subject area workshops</li> <li>engage experts</li> <li>ongoing public engagement &amp; awareness</li> <li>ESS draft consultation plan (phase 2)</li> <li>CEEP vision/goals/principles workshop</li> </ul>	<b>10</b> Sub-Committee Workshops	<ul style="list-style-type: none"> <li>Steering Committee Meeting No. 5 (key directions)</li> <li>workshop feedback (interim update)</li> <li>CEEP update</li> <li>draft Strategic Directions</li> </ul>	← Council Report 4
	<ul style="list-style-type: none"> <li>Comments from sub-committees and Interagency round-table</li> <li>draft ESS matrix</li> <li><u>draft Strategic Directions</u></li> </ul>	<b>11</b> Draft Community Consultation Plan (Phase 2)	<ul style="list-style-type: none"> <li>Steering Committee Meeting No. 6 (display panels)</li> <li>sub-committee summaries</li> <li>draft consultation plan (Phase 2)</li> <li>draft vision statement for public outreach</li> </ul>	← Council Report 5
	<ul style="list-style-type: none"> <li><u>Public Outreach (questionnaire)</u> <ul style="list-style-type: none"> <li>Vision</li> <li>Theme-based comments (directions, issues, opportunities)</li> </ul> </li> <li>promotion at events</li> <li>Staff consultation (workshops)</li> </ul>	<b>12</b> Outreach Phase 2	<ul style="list-style-type: none"> <li>public feedback</li> <li>staff feedback</li> </ul>	
	<ul style="list-style-type: none"> <li>public input</li> <li>staff input</li> <li>sub-committee input</li> </ul>	<b>13</b> Develop Framework	<ul style="list-style-type: none"> <li><u>Public Consultation Summary Report</u></li> <li><u>ESS report outline</u></li> <li>gap analysis</li> </ul>	← Council Report 6 (workshop)
	<ul style="list-style-type: none"> <li><u>Case studies</u></li> <li><u>Gap analysis</u></li> <li><u>Consultation Summary</u></li> </ul>	<b>14</b> Draft the Environmental Sustainability Strategy (ESS)	<ul style="list-style-type: none"> <li>Steering Committee meeting No. 7 (framework)</li> <li><u>approved consultation plan (phase 3)</u></li> <li><u>Draft ESS Report</u></li> </ul>	← Council Report 7 (memo) ← Council Report 8
	<ul style="list-style-type: none"> <li><u>Public Outreach (questionnaire)</u> <ul style="list-style-type: none"> <li>public response to ESS</li> <li>additional recommendations and suggestions</li> </ul> </li> <li>promotion at events</li> <li>Staff consultation (workshops)</li> </ul>	<b>15</b> Outreach Phase 3	<ul style="list-style-type: none"> <li><u>Summary Report</u> <ul style="list-style-type: none"> <li>public response to ESS</li> <li>additional recommendations and suggestions</li> </ul> </li> </ul>	← Council Report 9
	<ul style="list-style-type: none"> <li>public input (Phase 3)</li> <li><u>final ESS</u></li> </ul>	<b>16</b> Finalize Environmental Sustainability Strategy	<ul style="list-style-type: none"> <li>Council approval of <u>final ESS</u></li> </ul>	
Fall 2016	<ul style="list-style-type: none"> <li>report publication and distribution</li> </ul>	<b>17</b> Project Completion	<ul style="list-style-type: none"> <li>public announcement(s)</li> <li>Implementation Plan</li> </ul>	
2016 onward	<ul style="list-style-type: none"> <li>take action (implementation)</li> </ul>	<b>18</b> Implement and Monitor	<ul style="list-style-type: none"> <li>monitor outcomes</li> </ul>	

Version 2016 October 19

Legend:   boxes note steps led by City staff,   boxes note steps led by the consultant; and underlined items are key project deliverables.

## Attachment 2: ESS Process



### Phase 1 – Issues and Priorities

Jan. to July 2013

Broad, high-level

Issues, opportunities, vision

- Steering Committee convened: focus on guiding principles, draft theme areas.
- Phase 1 Public Consultation: online questionnaire (~400 responses), display boards, attendance at seven public events, Environmental Superheroes, Vision Tree, and Community Green Map.

#### Outcomes:

- Draft vision statement; confirmed scope (theme areas) and draft goals.

### Phase 2 – Exploring Further

July 2013 to Jan. 2015

Deeper, more focused

Goals, strategies, actions

- Sub-Committees (4) convened: focus on draft goals, strategies. 10 meetings held with over 100 people in total; networking by Sub-Committee members engaged another 550 people.
- Inter-Agency Roundtable, with representatives from neighbouring municipalities and other levels of government and other organizations.
- Phase 2 Public Consultation: online questionnaire (~800 responses), display boards, attendance at 15 public events, three invited presentations, public workshop, Community Green Map, youth video contest, and 150 others engaged via workshops and invited presentations using "Sustain-A-Bucks".

#### Outcomes:

- Feedback on draft vision, goals, strategies; suggestions for actions - by the City and by individuals; analysis of responses.

### Phase 3 – Draft ESS

Jan. 2015 to Jun. 2016

Broad, high-level

Framework, priorities

- Draft ESS report containing a framework (vision, goals, strategies, suggested actions) released to the community to check and see if it was "headed in the right direction".
- Phase 3 Public Awareness: over 4,600 people were made aware of the release of the Draft ESS by conversations, presentations, email updates, project website, and social media.
- Phase 3 Public Consultation: engaged over 450 people using online questionnaire (~300 responses), activities, webinar, Plinko ESS trivia, flash-survey, display boards, attendance at 13 public events including an ESS community stakeholder workshop, and an ESS public drop-in open house.

#### Anticipated outcomes:

- Confirmation of level of support for Draft ESS; input on how to improve the Final ESS.

### Attachment 3: CEEP Process

Phase 1 – <i>Setting the Scene</i> January to July 2013	Phase 2 – <i>Exploring Alternatives</i> July 2013 to July 2015	Phase 3 – <i>Draft CEEP</i> July 2015 to June 2016
Technical Work	Stakeholder Input	Community Engagement
Burnaby Today – Current Emissions	Scenario and Policy Development	Community Engagement, Final Plan
<ul style="list-style-type: none"> <li>• CEEP Steering Committee convened</li> <li>• CAN Tool model calibration</li> <li>• Baseline emissions modeling</li> </ul>	<ul style="list-style-type: none"> <li>• Renewable/district energy workshop</li> <li>• Community stakeholder workshop</li> <li>• Input from CEEP Steering Committee</li> <li>• ESS Steering Committee workshop</li> </ul>	<ul style="list-style-type: none"> <li>• Input from CEEP Steering Committee</li> <li>• Public consultation on Draft CEEP including targets and strategies</li> <li>• Incorporation of feedback into final CEEP, including goals, strategies and suggested actions</li> </ul>
<b>Outcomes:</b> <ul style="list-style-type: none"> <li>• Calibrated emissions model for Burnaby's context</li> <li>• Projected emissions</li> <li>• Strengths and challenges identified</li> </ul>	<b>Outcomes:</b> <ul style="list-style-type: none"> <li>• Draft CEEP targets and strategies</li> <li>• CEEP Technical Report</li> </ul>	<b>Outcomes:</b> <ul style="list-style-type: none"> <li>• Confirmation of level of support for Draft CEEP</li> <li>• Suggestions on how to improve the Draft CEEP report</li> <li>• Final CEEP report</li> </ul>

**Attachment 4:**  
*Summary of Changes to the Final ESS Framework*

<b>Final ESS</b>	
<b>Framework Components</b>	<b>Changes</b>
<b>1 Vision</b>	<b>None</b>
<b>10 Goals</b>	<b>None</b>
<b>49 Strategies</b>	<b>Total number remained the same - 49 strategies</b> <ul style="list-style-type: none"> <li>• 47 saw no change</li> <li>• 2 minor wording changes (Strategies 1.4, 9.3)</li> </ul>
<b>16 Big Moves</b>	<b>Total number remained the same – 16 “Big Moves”</b> <ul style="list-style-type: none"> <li>• 15 saw no change</li> <li>• 1 minor wording change (9.3)</li> </ul> <p>For more detail, please see Table 1 on page 35 of the Final ESS.</p>
<b>155 Suggested Actions</b>	<b>Total number of “Suggested Actions” increased from 151 to 155</b> <ul style="list-style-type: none"> <li>• 142 saw no change</li> <li>• 8 minor wording changes (1.4b, 1.7a, 4.1e, 5.4b, 5.6a, 6.2c, 6.6b, 9.2b)</li> <li>• 5 new (1.2f, 2.4e, 5.6b, 7.1g, 8.3c)</li> </ul>
<b>25 Quick Starts</b>	<b>Total number of “Quick Starts” increased from 24 to 25</b> <ul style="list-style-type: none"> <li>• 19 saw no change</li> <li>• 2 minor wording changes (11, 24)</li> <li>• 3 new (2, 13, 15)</li> <li>• 1 moved to a new Goal (23)</li> <li>• 2 replaced</li> </ul> <p>For more detail, please see Table 2 on page 36 of the Final ESS.</p>





Meeting 2016 Nov 8

## COMMITTEE REPORT

**TO:** CHAIR AND MEMBERS  
ENVIRONMENT COMMITTEE

**DATE:** 2016 Sept. 28

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

**FILE** 02410-20

**SUBJECT: UPDATE ON THE BURNABY INVASIVE SPECIES MANAGEMENT IN  
PARKS**

**PURPOSE:** To provide the Environment Committee the results of the Invasive Plant Management work plan in Burnaby parks for 2015.

---

**RECOMMENDATION:**

1. **THAT** a copy of this report be sent to City Council and the Parks, Recreation and Culture Commission for information.

**REPORT**

**BACKGROUND**

Invasive Species Management in Burnaby Parks began in 2009 with an Invasive Plant Survey, and Habitat Management Strategy. The survey focused on the top invasive plant species at that time (Attachment #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 in Burnaby, approximately 1,484 ha. were surveyed, and approximately 284 ha. or 19% of the total area surveyed were impacted by invasive species (Attachment #2).

The Habitat Management Strategy identified and prioritized key invasive plant species and locations to manage, and identified the goal to *control the spread* of invasive species beyond their current areas, with recognition that total *eradication is unlikely* for any one species. Management initiatives included a holistic approach including *manual* removal/maintenance, community and City staff education and raising awareness, community participation programs, and City participation in regional initiatives.

To: Environment Committee  
 From: Director Parks, Recreation & Cultural Services  
 Re: Update on the Burnaby Invasive Plant  
 Management in Parks  
 2016 November 8..... Page 2

Since 2009, initiatives from the Habitat Management Strategy have been implemented and are ongoing. Each year, initiatives are reviewed and adapted based on feedback and results of the previous years. This adaptive management included the expansion of the invasive plant program to 'species', and capture concerns with invasive wildlife and insects. The adaptive management approach has been an important part of tackling this very large challenge.

## **ACTION PLAN**

Invasive plant removal continues to be a large part of the invasive species program. Removal, monitoring and maintenance of invasive plants occur at two levels – park level and species level. Key parks and species have been identified for treatment for various reasons (Attachment #3).

Park wide removal and control occur at Cameron Park, George McLean Park, Taylor Park, Jim Lorimer Park, and Warner Loat where past Capital work projects included large scale invasive plant removal. The monitoring and maintenance program covers the entirety of these parks, and keeps invasive plants in these parks at low levels. Central Park, Deer Lake Park and Burnaby Mountain 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.

Specific invasive plant species are targeted based on balance between scale of the infestation and cost of removal, and environmental/social impact.

- Butterfly bush and Pickerelweed were identified in the 2009 invasive plant survey as existing in sufficiently low numbers to be eradicated in Burnaby Parks, and have been targeted for removal in all parks. Removal and control of both species have been successful with a majority of the sites showing no evidence of re-growth for multiple years.
- Purple Loosestrife is specifically targeted along the shores of Deer Lake. Eradication is likely impossible however, regular treatment prevent the plant from taking over the entire shoreline of the lake. The total number of hours required to maintain the site and the plant mass removed each year has continued to decline.
- English ivy is widespread throughout parks. All hazardous English ivy infestations growing into the tree canopy have been treated. Removal and control efforts are in less hazardous/safety related areas, when the opportunity allows (Attachment #4)

To: *Environment Committee*  
 From: *Director Parks, Recreation & Cultural Services*  
 Re: *Update on the Burnaby Invasive Plant  
 Management in Parks*  
 2016 November 8 ..... Page 3

- Scotch broom sites in parks (36 parks) were treated by manual removal in 2014. In 2015 all these sites were revisited and new growth was removed. Monitoring and maintenance of these sites will be rigorous for the next 4 years to capture new growth from the seed bank or sprouting from old root stumps.
- English holly removal continued at Central Park in conjunction with the Trail of Hope development and then across the park.
- Knotweed species is the only invasive plant species where herbicide treatment is used. The herbicide program began in 2010 with manual removal of 12 sites in 6 Parks. In 2011 12 sites were added totaling 23 sites. Following the city's Integrated Pest Management Program, where manual treatment was not effective and in the lack of 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 and measured the effectiveness of herbicide in comparison to manual pulling. In 2013, all knotweed manual pull sites from previous years were treated with herbicides.

The knotweed treatments began with stem injection and expanded to include foliar spray of stems too small to be injected. The trials have shown that manual treatment was not effective in controlling knotweed and actually caused the plant to spread its growth laterally. Stem injection of the large stems were effective in killing portions of plants, but the small untreated stems continued to thrive. With the combination of stem injection of large stems and foliar spray of smaller stems, where 100% of any one infestation is treated, the results of herbicide treatment have improved greatly. Sites monitored in July and October 2015 found efficacy was extremely high (95 to 100%) (Attachment #5).

In 2016 all sites will be monitored for re-growth and retreated as necessary, and an expansion of foliar spray treatment will target infestations of smaller stems, in a timely manner. New sites will be added to the treatment based on budget and on a priority system based on importance of sightlines or public safety reasons and frequency of maintenance. Locations that 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.

To: *Environment Committee*  
 From: *Director Parks, Recreation & Cultural Services*  
 Re: *Update on the Burnaby Invasive Plant  
 Management in Parks*  
 2016 November 8 ..... Page 4

## **EDUCATION AND PARTICIPATION**

Public and staff awareness and education are key to controlling the spread of invasive species. Programming in 2015 included responding to calls and emails from residents and communicating one-on-one, updating information on the city website along with articles in the local papers, and public invasive plant workshops. Volunteer activities were also offered to the public, and there were support and recognition for the work of volunteer community groups including: Byrne Creek Streamkeepers, the Eagle Creek Streamkeepers, the Stoney Creek Streamkeepers, Evergreen Foundation, TELUS, Delta Hotels and the Lower Mainland Green Team.

## **LOCAL REPRESENTATION IN REGIONAL COMMITTEE**

Burnaby Parks continues to be a representative on the Board of Directors for the Invasive Species Council of Metro Vancouver since the fall 2009. This opportunity allows 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, and places Burnaby in the forefront of action with addressing invasive species locally.

## **SUMMARY**

Stemming from a 2009 baseline survey of invasive plants in parks and green spaces and the resulting strategy and management plan, invasive plants are targeted for removal and control throughout various 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, and participation in regional efforts are integral parts of the Invasive Species Management in Parks. All current activities will continue in 2016.



Dave Ellenwood  
 DIRECTOR PARKS, RECREATION & CULTURAL SERVICES

HE:my:tc

### Attachments

P:\admin\tc\data\wp\he\reports\environ cmttee – invasive plant update - 2016.docx

## Attachment #1

Table 1. Top 13 Invasive Plant Species targeted after the 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>
Pickering 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>



Attachment #2**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 <sup>2</sup>
Pickrel weed	35 m <sup>2</sup> *
Giant hogweed	<1 m <sup>2</sup> *

Attachment #3**Table 3. Summary of work complete in 2015**

Treatment Program	Project	Start Year	Total Crew Hours	Total Volume (m <sup>3</sup> )	Number of Treatment Units	Number of Parks
Knotweed Maintenance	Mow barrier installation	2010	29	-	69	20
	Charles Rummel Emergency	2015	96	6	2	1
Park sweep	Cameron Park & George McLean	2010	101	6	N/A	2
	Central Park west zone	2014	20	4	N/A	1
Species sweeps	Butterfly bush	2010	19	6	38	3
	Pickeralweed	2009	15	0.5	17	2
	Purple loosestrife	2010	63	4.5	N/A	1
	Scotch broom	2010	36	5	N/A	2
	Aquatic plants: Burnaby Lake	2012	83	5	1	1
	Blackberry: Harrier Nest Site	2014	45	12	1	1
	English ivy	2011	175	600 trees	N/A	2
Restoration	Taylor Park	2010	53	2	1	1
	Jim Lorimer	2014	42	2.5	1	1
	Warner Loat	2013	59	6.25	1	1
<b>TOTAL</b>			<b>836</b>	<b>59.75</b>	<b>-</b>	<b>-</b>

Attachment #4**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

Attachment #5**Table 5. Knotweed 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 <sup>A</sup>
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 <sup>B</sup>
5	Oct 27-31, 2014	111	36	N/A <sup>B</sup>
6	Jun 29-Jul 13, 2015	178	41	N/A <sup>B</sup>
7	Sep 28-Oct 23, 2015	181	41	N/A <sup>B</sup>

<sup>A</sup> Stems on these sites were treated if injectable size.

<sup>B</sup> In 2015 if stems were too small to inject they were treated by foliar application



Meeting 2016 Nov 8

## COMMITTEE REPORT

---

**TO:** CHAIR AND MEMBERS ENVIRONMENT COMMITTEE **DATE:** 2016 November 3

**FROM:** DIRECTOR PLANNING AND BUILDING **FILE:** 33000-01  
*Reference: Environmental Awards*

**SUBJECT:** 2017 ENVIRONMENTAL AWARDS PROGRAM

**PURPOSE:** To seek approval for the 2017 Environmental Awards Program Terms of Reference, call for nominations and an expenditure for promotion and advertising.

---

**RECOMMENDATIONS:**

1. **THAT** Council approve the proposed Terms of Reference and call for nominations for the 2017 Environmental Awards Program.
2. **THAT** Council approve an expenditure of \$2,500 from the Boards, Committees and Commissions' operating budget for promoting and advertising the Environmental Awards Program call for nominations.

**REPORT****1.0 BACKGROUND**

The City of Burnaby's annual Environmental Awards Program recognizes significant achievements in environmental stewardship and sustainability by people, businesses, organizations, and institutions in our community. The program was established in 1996 based on policy direction in the City's State of the Environment Report (1993) that supported community stewardship, environmental awareness and public information.

The Environmental Awards Program begins with a call for nominations, followed by a selection process, whereby the citizen representatives on the Environment Committee review each submission and recommend a list of worthy recipients to the Environment Committee and then Council for approval. Last year, the awards were presented at a Regular Meeting of Council, which was preceded by a reception at City Hall for the recipients and their families. A reception at City Hall and presentation of the awards by Council is proposed for 2017.

This report seeks Council approval for the 2017 Environmental Awards Program Terms of Reference, the call for nominations and an advertising expenditure from the Boards, Committees and Commissions' budget to promote the nomination process.



To: Environment Committee  
 From: Director Planning and Building  
 Re: 2017 Environmental Awards Program  
 2016 November 3 .....Page 2

## 2.0 ENVIRONMENTAL AWARDS PROGRAM

### 2.1 Core Elements

The Environmental Awards Program for 2017 retains the six award categories. *Communications, Community Stewardship, Planning and Development, and Youth* are the original four categories, established in 1996. A fifth category, *Chemical Free Lawns and Gardens*, was established in 2004, which was changed to *Green Choices* in 2009 when the scope of the category was broadened. *Business Stewardship* was added as the sixth category in 2007. These categories have proven to be flexible, adaptable and inclusive with regards to the variety of nominations received.

As established in 2000, there are two award designations in each category:

- *Environmental Awards*, for recognition of environmental achievements of a larger scale, such as long-term commitments to an organization or cause, leadership of other individuals, and projects of a significant size and relatively complex scope that have a broader community impact, and
- *Environmental Stars*, for recognition of environmental achievements of a smaller or more individual scale that may nevertheless serve to catalyze larger initiatives and inspire others.

For each of the six categories, one Environmental Award is available. The number of stars awarded in each category will be limited to a maximum of two.

A complete list of the recipients since 1996 can be found on the City's website at [www.burnaby.ca/environmentawards](http://www.burnaby.ca/environmentawards).

### 2.2 Proposed Changes

Each year, a Terms of Reference (ToR) for the Environmental Awards is made available to the public to promote the program, outline the criteria for each of the six award categories, and provide information about how to make a nomination. For 2017, minor changes are proposed to the ToR to align the awards program with the City's Environmental Sustainability Strategy (ESS). The changes consist of updating the descriptive text and criteria of the award categories to reflect the ESS and current sustainability practice. Text changes are also proposed based on recommendations from Environment Committee members and observations from Planning Department staff who administer the program.

A copy of the proposed 2017 Terms of Reference is provided as **Attachment A**. The changes to the ToR are described briefly below.

#### *Alignment with ESS*

The framework for the proposed ESS consists of ten goals, which are described graphically in the ESS document as a flower with ten petals, with each petal representing one goal. This graphic is included prominently on the 2017 ToR and in the introductory text the public is encouraged to review the ESS document online. The introductory text also notes that nominators this year will be

To: Environment Committee  
 From: Director Planning and Building  
 Re: 2017 Environmental Awards Program  
 2016 November 3 .....Page 3

asked to indicate on their nomination form, by checking a box, which of the ten ESS goals is supported by their nominee's environmental achievements.

#### *Text revisions to award categories*

For the **Business Stewardship** category, 'energy use, water use, waste reduction, purchasing, and transportation' are referenced as specific areas of a business's ecological footprint.

For the **Communications** category, the award criteria is revised to include outreach initiatives and campaigns that help encourage environmentally sustainable behaviors in our community. Recent nominations and award recipients in the Communications category have been for these types of initiatives.

For the **Community Stewardship** category, 'citizens of Burnaby' is replaced with 'individuals, groups and organizations'. This change acknowledges that sometimes it is appropriate this award be issued to a community group for their collective stewardship efforts, rather than an individual. It also acknowledges that some environmental groups based in Burnaby have individual members that do not live in Burnaby but have nonetheless made significant contributions to a Burnaby-based stewardship group working solely in our community. It is proposed that in such cases, the primary residence of the individual would continue to be confirmed through the nomination process and their potential as an award recipient vetted through the selection process. For this category, the text was also revised to confirm that 'stewardship efforts' must be for areas 'in the City of Burnaby'.

For the **Green Choices** category, the recipient criteria for the award is expanded to include not just residents of Burnaby, but also Burnaby-based community groups, organizations, strata councils and institutions. This change reflects how this category has been applied in practice over the last few years and sends a signal to the public that the awards program is interested in the environmental sustainability efforts of multi-family buildings managed by strata councils. Additional elements of environmental sustainability are also added to the descriptive text, consistent with theme areas and goals of the ESS.

For the **Planning and Development** category, the terminology used to describe the types of innovative environmental features and green building technologies is revised to reflect current sustainability practices and the ten themes and goals of the ESS.

There are no substantive changes to the **Youth** category.

### **2.3 Call for Nominations**

A six week long nomination period is proposed to open on Tuesday, February 14<sup>th</sup>, 2017 and close on Friday, March 31<sup>st</sup>, 2017. The call for nominations will be promoted across the City using the City's web page, bus shelter ads, poster placement in all civic facilities, direct email contact with the local environmental community and the City's community partners, social media, the City's new environmental e-newsletter, and print or web-based advertising in local newspapers (funds requested for advertising are discussed in Section 3.0).

To: Environment Committee  
 From: Director Planning and Building  
 Re: 2017 Environmental Awards Program  
 2016 November 3 .....Page 4

After the nomination period closes, the citizen representatives and Chair of the Environment Committee will meet to review the nominations and recommend recipients to the Environment Committee and Council for approval.

Presentation of Environmental Awards and Stars to the selected recipients will be at the Regular Meeting of Council on May 29, 2017, to be preceded by a reception at City Hall for the recipients and their immediate families.

### 3.0 CORPORATE SPONSORSHIP AND REQUESTED EXPENDITURES FOR ADVERTISING

Staff plans to solicit corporate sponsorship, as in previous years, to provide supplementary support for Environment Week and the Environmental Awards Reception. Sponsorship provides corporations in the community the opportunity to become involved in local environmental stewardship.

Council approval is also sought for an expenditure of \$2,500 from the Boards, Committees and Commissions' operating budget to advertise and promote the Environmental Awards Program call for nominations. This amount will provide for a combination of online and print advertising in local media, production and installation of bus shelter ads, printing costs for posters and promotional materials and paid advertising on social media. The requested expenditure is the same as was approved in 2016.

### 4.0 CONCLUSION

The Environmental Awards Program celebrates those individuals, groups, businesses, and institutions that are contributing to the environmental sustainability of Burnaby's natural and built environments. It is recommended that the Committee seek Council approval for the 2017 Environmental Awards Program Terms of Reference, call for nominations and an advertising expenditure from the Boards, Committees and Commissions' operating budget for promotion and advertising of the program.

  
 Lou Pelletier, Director  
 PLANNING AND BUILDING

MS/sla

**Attachment**

Copied to: City Manager  
 Deputy City Manager  
 Director Parks, Recreation and Cultural Services  
 Director Engineering  
 Director Finance  
 Chief Librarian  
 Manager, Environmental Engineering

Officer in Charge, RCMP  
 Fire Chief  
 City Clerk  
 President, CUPE Local 23

R:\Long Range Clerical\DOCS\MS\Committee Reports\2016\2017 Environmental Awards Program (2016.11.08).docx





ENVIRONMENTAL AWARDS PROGRAM

Since 1996, the City of Burnaby's Environmental Awards Program has recognized contributions made by individuals, groups, organizations, institutions, and businesses to environmental sustainability in our community.

These contributions help our community meet the goals of the City's newly adopted **Environmental Sustainability Strategy (ESS)**, a plan for Burnaby's green future. The **ESS** contains 10 goals.

To learn more about the **ESS**, its vision, goals, strategies, actions, visit [www.burnaby.ca/ess-input](http://www.burnaby.ca/ess-input). **For each award nomination this year, nominators will be asked to tell us which ESS goal(s) the achievements of their nominee support.**

Show your support for Burnaby's environmental leaders by making a nomination today!

# Environment Awards 2017

[burnaby.ca/environmentawards](http://burnaby.ca/environmentawards)

## Award Categories

### 1 Business Stewardship

This category identifies businesses located in Burnaby, whose exemplary business practices and stewardship activities have promoted environmental sustainability in the workplace or in the community. Nominated businesses should demonstrate excellence in raising awareness of environmental issues with staff or clients, reducing their ecological footprint in areas such as energy use, water use, waste reduction, purchasing, and transportation and/or notably enhancing or rehabilitating the City's environment.

### 2 Communications

This category includes all forms of print and digital media, video, audio or multi-media presentations, and outreach initiatives or campaigns that help to increase the understanding of environmental issues in Burnaby or to promote environmentally sustainable behaviors in our community. The nominated work should demonstrate a comprehensive understanding of an environmental issue or sustainability and its relationship to the citizens of Burnaby.

### 3 Community Stewardship

This category identifies individuals, groups and organizations who have been actively involved in promoting environmental stewardship in the City of Burnaby for several years and whom, through their efforts, have increased public awareness of an environmental issue or notably enhanced or rehabilitated the City's environment.

### 4 Green Choices

This category recognizes residents of Burnaby, including individuals, community groups, organizations, strata councils, and institutions, who demonstrate an exemplary commitment to environmental sustainability in the home, garden and community through any or all of the following means: household energy conservation, waste reduction, recycling of green waste, water efficiency, innovation in natural garden practices and native plant landscaping, local food production, active transportation and other sustainable lifestyle choices.

### 5 Planning and Development

This category highlights exemplary developments that demonstrate strategic planning, innovative environmental features and green building technologies that reduce energy use and emissions from buildings, reuse materials, use water efficiently, employ innovative approaches to stormwater and wastewater management, encourage active transportation, and protect and enhance aquatic and terrestrial ecosystems. Developments may range in scale from large commercial, industrial, institutional or residential projects to individual new or renovated buildings.

### 6 Youth

This category recognizes the contributions that children or teenagers have made, either through their own initiatives or through school programs that have resulted in enhanced public awareness of environmental sustainability issues or notably enhanced or rehabilitated the City's environment.

## Nomination Information

Visit [burnaby.ca/environmentawards](http://burnaby.ca/environmentawards) for an on-line nomination form. A print version is also available.

### Award Process

There are two levels of awards: Environmental Award and Environmental Star. A maximum of 1 Environmental Award and 2 Environmental Stars are available per category in a given year. Criteria for the two levels of awards are available on our website.

The citizen representatives on the City's Environment Committee review the nominations and recommend recipients to Council for approval. Environmental Award and Environmental Star recipients will be presented their awards at a Regular Meeting of Council on May 29, 2017.

### Additional Information

Questions can be directed to:  
City of Burnaby Planning Department  
Tel: 604-294-7400  
E-mail: [planning@burnaby.ca](mailto:planning@burnaby.ca)  
[burnaby.ca/environmentawards](http://burnaby.ca/environmentawards)

## Nomination Deadline:

**March 31, 2017**