

Agenda

# **Public Works & Transportation Committee**

Anderson Room, City Hall 6911 No. 3 Road Thursday, May 22, 2014 4:00 p.m.

Pg. # ITEM

# MINUTES

**PWT-4** Motion to adopt the minutes of the meeting of the Public Works & Transportation Committee held on Wednesday, April 24, 2014.

# NEXT COMMITTEE MEETING DATE

Wednesday, June 18, 2014, (tentative date) at 4:00 p.m. in the Anderson Room

# ENGINEERING AND PUBLIC WORKS DEPARTMENT

1. LIGHT EMITTING DIODE (LED) STREET LIGHT STANDARDS (File Ref. No. 10-6000-01) (REDMS No. 4223751)

**PWT-15** 

See Page **PWT-15** for full report

Designated Speaker: Milton Chan

STAFF RECOMMENDATION

That the staff report titled Light Emitting Diode (LED) Street Light Standards dated May 1, 2014, from the Director, Engineering be received for information.

#### 2. LEGISLATIVE CHANGES: UPDATE AND REVIEW – NEW WATER SUSTAINABILITY ACT, FEDERAL FISHERIES ACT UPDATE AND OMBUDSPERSON REVIEW

(File Ref. No. 10-6125-00) (REDMS No. 4225681)

**PWT-19** 

See Page **PWT-19** for full report

Designated Speaker: Lesley Douglas

STAFF RECOMMENDATION

That the staff report titled Legislative Changes: Update and Review – New Water Sustainability Act, Federal Fisheries Act Update and Ombudsperson Review, dated May 5, 2014 from the Director, Engineering be received for information.

3. MULTI-MATERIAL BC PROGRAM - POST COLLECTION ARRANGEMENTS

(File Ref. No. 10-6370-03-01) (REDMS No. 4229060)

**PWT-25** 

See Page **PWT-25** for full report

Designated Speaker: Suzanne Bycraft

#### STAFF RECOMMENDATION

- (1) That the Chief Administrative Officer and General Manager, Engineering & Public Works be authorized to negotiate and execute an amendment to Contract T.2988, Residential Solid Waste & Recycling Collection Services with Sierra Waste Services Ltd. (in accordance with the May 9, 2014 staff report titled Multi-Material BC Program – Post Collection Arrangements from the Director, Public Works (the 'Staff Report')) to establish a recycling materials consolidation facility under the terms outlined in the Staff Report; and
- (2) That additional funding for the consolidation facility in the amount of \$140,000 plus applicable taxes for one-time costs, and related service costs per tonne of approximately \$320,000 annually be approved, with funding from the Sanitation and Recycling provision.

#### Pg. #

ITEM

#### 4. CLIMATE ACTION REVENUE INCENTIVE PROGRAM (CARIP) & CARBON NEUTRAL IMPLEMENTATION STRATEGY REPORTING UPDATE

(File Ref. No. 10-6000-01) (REDMS No. 4221410 v. 5)

**PWT-44** 

#### See Page **PWT-44** for full report

Designated Speaker: Peter Russell

#### STAFF RECOMMENDATION

That:

- (1) Climate Action Revenue Incentive Program reports indicating the City's achievement of carbon neutrality in 2013, included as attachments in the staff report titled Climate Action Revenue Incentive Program (CARIP) & Carbon Neutrality Reporting – Update, dated April 30, 2014, from the Director, Engineering, be posted on the City's website; and
- (2) staff work with the Climate Action Secretariat, joint Provincial-UBCM Green Communities Committee, and other municipalities to refine carbon accounting methods that are part of the Carbon Neutral Progress Reporting and Climate Action Recognition programs.

## 5. MANAGER'S REPORT

# ADJOURNMENT





# **Public Works & Transportation Committee**

Date: Thursday, April 24, 2014

Place: Anderson Room Richmond City Hall

- Present: Councillor Linda Barnes, Chair Councillor Chak Au Councillor Derek Dang Councillor Linda McPhail Councillor Harold Steves Mayor Malcolm Brodie
- Call to Order: The Chair called the meeting to order at 4:00 p.m.

The Chair advised that the order of the agenda would be varied to consider Item No. 6 – Richmond's Ecological Network Management Strategy prior to Item No. 2 – Bath Slough Revitalization Initiative. Also, Committee agreed to consider a matter regarding dredging as Item No. 8A.

# MINUTES

It was moved and seconded That the minutes of the meeting of the Public Works & Transportation Committee held on Wednesday, March 19, 2014, be adopted as circulated.

# CARRIED

# NEXT COMMITTEE MEETING DATE

Thursday, May 22, 2014, (tentative date) at 4:00 p.m. in the Anderson Room

# PLANNING & DEVELOPMENT DEPARTMENT

# 1. PROPOSED RAILWAY-ROADWAY GRADE CROSSINGS REGULATIONS AND STANDARDS

(File Ref. No. 01-0140-20-TCAN1-01) (REDMS No. 4165866 v.3)

Victor Wei, Director, Transportation, advised that staff have recently learned that the Federation of Canadian Municipalities in conjunction with TransLink will be sending a letter to the federal Minister of Transport and senior staff at Transport Canada expressing significant concerns with the proposed Railway-Roadway Grade Crossings Regulations and Standards.

It was moved and seconded

- (1) That a letter be sent to the federal Minister of Transport and to Transport Canada as formal comment in response to the prepublication of the proposed Grade Crossings Regulations in the Canada Gazette, Part I, on February 8, 2014:
  - (a) requesting that the specification of a maximum time limit of five minutes that a moving train may block any at-grade roadway crossing be included in the proposed Grade Crossings Regulations;
  - (b) reiterating the previous Council resolution of July 23, 2012 that the proposed Grade Crossings Standards be revised to be engineering guidelines to allow for a risk-based approach that provides flexibility to address any identified safety concerns and, if the proposed Standards are implemented, a dedicated program be established by Transport Canada to provide adequate funding support to municipalities for any upgrades required from the new Standards; and
- (2) That a copy of the above letter be sent to all Richmond Members of Parliament, the Federation of Canadian Municipalities, TransLink, and Lower Mainland municipalities affected by the proposed Regulations and Standards for support of the above request.

CARRIED

# ENGINEERING AND PUBLIC WORKS DEPARTMENT

6. RICHMOND'S ECOLOGICAL NETWORK MANAGEMENT STRATEGY (File Ref. No. 10-6000-01/2014) (REDMS No. 4143643 v.3) Peter Russell, Senior Manager, Sustainability and District Energy, provided background information and in reply to queries from Committee advised that (i) the intent of the proposed public consultation is to identify key actions that will facilitate the achievement of goals set out in the Ecological Network Management Strategy, (ii) staff anticipate reporting back with an action plan in fall 2014 or winter 2015, and (iii) as a key stakeholder, the Advisory Committee on the Environment will be engaged as part of the proposed public consultation.

It was moved and seconded

That the Ecological Network Management Strategy, as described in the staff report titled Ecological Network Management Strategy – Phase 1 dated April 3, 2014, from the Director, Engineering, be endorsed for the purposes of public consultation.

CARRIED

#### 2. BATH SLOUGH REVITALIZATION INITIATIVE

(File Ref. No. 10-6125-25-017) (REDMS No. 4149768 v.9)

Discussion ensued and Committee requested that staff forward the Bath Slough Revitalization Initiative to the Council / School Board Liaison Committee for information. Also, Committee requested that staff provide a detailed map identifying the Bath Slough catchment area prior to the next Council meeting.

In reply to a query from Committee, staff advised that illegal dumping in the Bath Slough catchment has ebbed.

It was moved and seconded

- (1) That Option 1 Proceed with the Bath Slough Revitalization Initiative on a Pilot Basis, as presented in the staff report titled Bath Slough Revitalization Initiative dated February 6, 2014, from the Director, Engineering, be endorsed; and
- (2) That the staff report titled Bath Slough Revitalization Initiative dated February 6, 2014, from the Director, Engineering be forwarded to the Council / School Board Liaison Committee for information.

CARRIED

## 3. GATEWAY THEATRE – ENERGY RETROFIT PROJECT

(File Ref. No. 06-2050-20-GT) (REDMS No. 4169249 v.4)

In reply to queries from Committee, Mr. Russell and Robert Gonzalez, General Manager, Engineering and Public Works provided the following information:

- energy accomplishments such as the 30% reduction in natural gas use (when compared to the previous year) are highlighted in the annual Corporate Energy Update report;
- staff are continuously seeking additional opportunities to promote energy accomplishments, such as the introduction of a 'Green Newspaper' in partnership with the Corporate Communications division;
- as a result the pilot retrofit project, staff are examining the feasibility of implementing such a project in other City facilities; also, the Lulu Island Energy Corporation enables the City to examine such a project for private buildings; and
- based on the first year cost avoidance savings, including the incentive funding, the project is estimated to have a six year payback period.

#### It was moved and seconded

That the staff report titled Gateway Theatre – Energy Retrofit Project dated March 26, 2014, from the Director, Engineering be received for information.

#### CARRIED

## 4. JAPANESE FISHERMAN'S BENEVOLENT SOCIETY BUILDING – INTERIOR DESIGN

(File Ref. No. 06-2050-20-JNB) (REDMS No. 4171969 v.4)

Lorne Slye, 11911 3<sup>rd</sup> Avenue, Chair of the Steveston Historical Society, requested that the proposed interior design of the Japanese Fisherman's Benevolent Society building incorporate donated shoji screens. Mr. Slye was of the opinion that these shoji screens were valuable artifacts and, therefore they should be displayed.

In reply to a query from the Chair, Connie Baxter, Supervisor, Museum and Heritage Sites, advised that, in speaking with the interior design architect and contractor, the shoji screens can indeed be incorporated as part of the interior design renovations.

The Chair thanked staff and community members for their time and commitment in ensuring this project maintain and promote the building's historical and cultural significance.

#### It was moved and seconded

That the status update report for the Japanese Fisherman's Benevolent Society Building Interior Design be received for information.

CARRIED

# 5. RICHMOND ENERGY CHALLENGE AND THE CLIMATE SMART PROGRAM

(File Ref. No.) (REDMS No. 4196803)

In reply to queries from Committee, Mr. Russell and Katie Ferland, Business Development Liaison, provided the following information:

- businesses discontinuing using the Climate Smart tool to monitor greenhouse gas emissions indicated that they wish to see whether the Pacific Carbon Trust and Fortis BC will review support for the Climate Smart program;
- staff anticipate that the Richmond Energy Challenge be funded in its entirety by external funds; and
- staff anticipate recruiting businesses to participate in the Richmond Energy Challenge throughout the summer; the Richmond Chamber of Commerce and other similar groups will be approached as part of the recruitment process.

It was moved and seconded

That, as presented in the staff report titled Richmond Energy Challenge and the Climate Smart Program dated March 28, 2014, from the Director, Engineering:

- (1) staff's development and implementation of a "Richmond Energy Challenge" for larger private buildings be endorsed; and
- (2) the Chief Administrative Officer and General Manager, Engineering and Public Works be authorized to execute a funding agreement with BC Hydro, and other potential funders, to implement this Challenge.

CARRIED

#### 6. RICHMOND'S ECOLOGICAL NETWORK MANAGEMENT STRATEGY (Tile Bof No. 10 (000 01/2014) (DEDMEN: 4142(42 m2))

(File Ref. No. 10-6000-01/2014) (REDMS No. 4143643 v.3)

Please see Pages 2 and 3 for action on this matter.

# 7. MANHOLE COVER ART CONTEST AND PROGRAM

(File Ref. No. 11-7000-09-20-100) (REDMS No. 4184720)

It was moved and seconded

That the implementation of the public art contest and program for integrating artwork on sanitary sewer and storm drainage manhole covers, as outlined in the staff report from the Director, Engineering, and Director, Arts, Culture and Heritage Services dated April 8, 2014, be endorsed.

CARRIED

# 8. MULTI-MATERIAL BC PROGRAM IMPLEMENTATION

(File Ref. No. 10-6370-03-01) (REDMS No. 4196769 v.2)

Suzanne Bycraft, Manager, Fleet and Environmental Programs, commented on forthcoming aspects of the Multi-Material BC (MMBC) program implementation, noting that staff are exploring partnership opportunities with other local governments for a consolidated processing plant.

In reply to queries from Committee, Ms. Bycraft provided the following information:

- there have been a number of concerned expressed by businesses in regards to the costs associated with the implementation of the MMBC program;
- businesses have the opportunity to submit their own stewardship plan or work directly with MMBC;
- MMBC sets recycling rates and as such, this is beyond the City's purview;
- public outreach initiatives include (i) awareness advertising in local newspapers, (ii) an informational insert in the metered utility bills, (iii) additional information will be distributed to single-family homes in conjunction with the delivery of new recycling receptacles, and (iv) information on the City's website and social media accounts;
- public outreach initiatives are geared towards residents;
- the recycling receptacle for glass materials was intentionally designed to be small so that it would not be cumbersome;
- residents may continue to use existing blue boxes; also, there will be a taller blue box; and
- a subsequent staff report will be brought forward for Council consideration regarding costs related to the processing plant.

Discussion ensued and Committee commented that the MMBC program is mandated by the provincial government and follows a 'polluter-pay' model.

The Chair requested that forthcoming public communication materials include information regarding the City's rationale to partner with MMBC. Also, Committee requested that Tamara Burns, Vice-President Supply, Canadian Stewardship Services Alliances receive a copy of the letter addressed to Allan Langdon, Managing Director of MMBC. It was moved and seconded

- (1) That the Chief Administrative Officer and General Manager, Engineering & Public Works be authorized to negotiate and execute an amendment to or replacement of Contract T.2988, Residential Solid Waste & Recycling Collection Services with Sierra Waste Services Ltd. (in accordance with the April 7, 2014 staff report titled "Multi-Material BC Program Implementation" from the Director, Public Works (the "Staff Report")), to:
  - (a) include acquisition, storage, assembly, labelling, delivery, and related tasks for the bags, containers and carts associated with implementation of the program changes and added recycling materials to be collected under the terms of the City's agreement with Multi-Material BC per Section1, Item a) of the Staff Report;
  - (b) remove the processing and marketing components from the scope of work and incorporate other changes described in Section 1, Item b) of the Staff Report, effective May 19, 2014;
  - (c) modify the scope of work as described in Section 1, Item c) of the Staff Report to collect glass as a separate recycling stream, newsprint and mixed paper products as one combined stream, and collect an expanded scope of recycling materials as defined by Multi-Material BC as Packaging and Printed Paper for all residents serviced by the City for recycling services under Contract T.2988, effective May 19, 2014;
  - (d) add administrative provisions to address the requirements of the contract with MMBC, as described in Section 1, Item d) of the Staff Report;
  - (e) revise the annual contract amount to approximately \$6,391,841.26 (depending on contract variables such as required added equipment, inflationary and unit count increases), effective May 19, 2014;
- (2) That additional funding for the remaining portion o f the 2014 Sanitation and Recycling budget be approved at the estimated amount of \$650,000 and that full program funding in the estimated amount of \$1,040,000 be included in the 2015 utility budget process for Council's consideration;

- (3) That a letter be sent to Allan Langdon, Managing Director of Multi-Material BC (MMBC), copied to Tamara Burns, Vice-President Supply, Canadian Stewardship Services Alliances, expressing concern regarding the negative operational and financial impacts associated with the current designated post-collection site (located in Surrey) for Richmond's recycling materials, and that MMBC be urged to establish a site within closer proximity to Richmond; and
- (4) That staff evaluate options, alternatives and costs associated with addressing the operational and logistical challenges associated with the current designated post-collection site for Richmond, and report back to Council.

#### CARRIED

#### 8A. DREDGING IN THE FRASER RIVER

(File Ref. No.)

Councillor Steves distributed copies of an article titled 'Plan for deeper dredging in Fraser River could have high environmental price' published April 22, 2014 in *Business In Vancouver* (attached to and forming part of these minutes as Schedule 1) and spoke of adverse affects of dredging in the Fraser River.

Discussion ensued regarding the article and staff was requested to contact University of British Columbia Professor Michael Church.

As a result of the discussion, the following **referral** was introduced:

It was moved and seconded

That the article titled 'Plan for deeper dredging in Fraser River could have high environmental price' published April 22, 2014 in Business In Vancouver be referred to staff for analysis and report back.

#### CARRIED

#### 9. MANAGER'S REPORT

#### (i) 2014 Capital Projects Open House

John Irving, Director, Engineering, highlighted that the 2014 Capital Projects Open House was well attended and advised that staff are currently planning public tours of City infrastructure, such as pump stations.

#### (ii) 2014 REaDY Youth Summit

Mr. Russell advised that the 2014 REaDY Youth Summit will be held at R.A. McMath Secondary School on Saturday, April 26, 2014. He highlighted that 500 people have registered to attend the event and staff anticipate approximately 200 additional walk-in attendees.

# **ADJOURNMENT**

It was moved and seconded *That the meeting adjourn (4:46 p.m.).* 

#### CARRIED

Certified a true and correct copy of the Minutes of the meeting of the Public Works & Transportation Committee of the Council of the City of Richmond held on Thursday, April 24, 2014.

Councillor Linda Barnes Chair Hanieh Berg Committee Clerk

# BUSINESS VANCOUVER

Published April 22, 2014 ENVIRONMENT AND SUSTAINABILITY Schedule 1 to the Minutes of the Public Works and Transportation Committee meeting held on Thursday, April 24, 2014.

# Plan for deeper dredging in Fraser River could have high environmental price

Proposal would destroy natural flood barriers, UBC geographer says By Jen St. Denis

Backers of a plan to dredge the Fraser River deeper say the massive infrastructure project would create jobs and boost the shipping potential of the region.

But a geographer who has studied the river says the project would come with potentially costly environmental downsides, such as an increased risk of flooding in Richmond.

Fraser Surrey Docks, a shipping terminal located on the river, and the Surrey Board of Trade (SBOT) were recently in Ottawa to promote more federal funds for the river's upkeep (see "Fraser port pushing its global" business potential" – BIV issue 1276; April 15–21).

"There needs to be a sustainable funding plan for dredging of the Fraser River and the investment needs to come from the federal government, just as they have a sustainable funding plan to dredge the St. Lawrence seaway," Anita Huberman, chief executive officer of SBOT, told Business in Vancouver.

SBOT and Fraser Surrey Docks would also like to see the river dredged deeper to accommodate the very large cargo ships that are becoming more common in shipping.

Currently, Port Metro Vancouver spends \$15 million a year to dredge the river to its current depth of 11.5 metres, and recoups around \$10 million by selling the sand to cement makers. The extra dredging proposed would deepen the river to 13.5 metres.

Making such a big modification to B.C.'s biggest river shouldn't be taken lightly, said Michael Church, a professor emeritus of geography at the University of British Columbia who has studied the Fraser.

"It's a bad idea," Church said, explaining that the Fraser River moves millions of tonnes of sand and silt every year and deposits that material on the delta where the river meets the sea.

If that process were interfered with, a chain reaction would occur that would reduce the amount of shoreline wetlands and put Richmond at increased danger from storm surges, Church said, especially as the sea level rises over the next 50 to 75 years. (The B.C. governme**ptyyq**dic**t g**ea levels will rise by one metre over the next 100 years.)

#### 4/24/2014

#### Business In Vancouver: Printable story

"That sand which gets stopped in the channel doesn't get sent to the delta front to nourish the tidal flats at the front of the delta, so you lose nourishment from the delta front," Church said.

"With the rising sea level, that means that ... you'll submerge the delta front, which will then bring waves up over the tidal flat, which will attack the salt marshes and drive the salt marshes back and bring the sea against the dikes."

The current level of dredging has already reduced the amount of silt deposited on the delta from three million tonnes a year to one million, Church said.

"That land is keeping the heavy waves of the sea off the dikes and the farmland and urban settlement of Richmond behind it," he said.

"One of the consequences if you stop sand nourishment to the delta front is that you'll have bigger waves coming up across the delta top and against the dikes."

The nature of the Fraser would also mean the project would be very costly to maintain: according to Church, deepening the river would cause bigger amounts of sediment to be deposited on the riverbed, which would then have to be cleared away.

Church noted that New York City and several Gulf Coast states are now focused on regenerating coastal wetlands as a bulwark against natural events like hurricanes.

A better use of taxpayer dollars would be to gradually upgrade the existing dikes along the Fraser, Church said. Those dikes are designed to stop a "short, sharp flood" but are vulnerable to longer floods and to earthquakes.

## Where should we put the port?

The Fraser River will eventually have to be dredged deeper just to keep up with shipping standards, Tom Corsie, vice-president of real estate for Port Metro Vancouver, told Business in Vancouver in an October 2013 interview.

But Harold Steves, an advocate for farmland and a Richmond city councillor, questions the push for increased shipping on the Fraser River when other terminals exist in Burrard Inlet and Roberts Bank.

"The port says they want to develop 2,600 acres of farmland further up the river," Steves said. "We're really hard pressed to maintain both agriculture and fisheries, which used to be the mainstay of this region."

Michael Church, a University of British Columbia geography professor, said it makes more sense to further develop port facilities in Burrard Inlet, a natural deep-water port that is protected from the elements.

"It's a bit of a mystery to me why Fraser Surrey Docks are regarded as so important when we have an excellent harbour in Burrard Inlet," Church said.

© Copyright 2014, Business In Vancouver Story URL: <u>http://www.biv.com/article/20140422</u> **BUV0114/304229980/-1/BIV0100/plan-for-deeper-**<u>dredging-in-fraser-river-could-have-high-environmental-price</u>



То:	Public Works and Transportation Committee	Date:	May 1, 2014
From:	John Irving, P.Eng. MPA Director, Engineering	File:	10-6000-01/2014-Vol 01
Re:	Light Emitting Diode (LED) Street Light Standards		

#### Staff Recommendation

That the staff report dated May 1, 2014, titled "Light Emitting Diode (LED) Street Light Standards" from the Director, Engineering be received for information.

John Irving, P.Eng. MPA Director, Engineering (604-276-4140)

REPORT CONCURRENCE				
ROUTED TO:		CONCURRENCE OF GENERAL MANAGER		
Roads & Construction				
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:	APPROVED BY CAO		

# Staff Report

## Origin

LED street lighting technology continues to rapidly progress in terms of affordability, applicability, and energy savings. As the technology matures, more vendors have been approaching the City seeking approval of their products. The increasing number of vendors and products available has necessitated the development of standards to clearly identify minimum performance criteria and Illuminating Engineering Society of North America (IESNA) industry standard lighting requirements.

Staff have evaluated a number of fixtures from various suppliers in the past few years, and the Engineering Design Standards (see Attachment 1) are being updated to clarify the evaluation process for prospective vendors.

#### Analysis

#### Benefits of LED Street Lighting

The main benefit of an LED street light over a traditional street light is increased energy efficiency and the corresponding energy cost savings and reduction in greenhouse gas emissions. An LED fixture uses approximately 40% less energy than other light sources while maintaining the same light output. LED street lights are also more directional, which helps reduce the amount of light pollution from the street lighting system.

LED street light systems also have the potential to reduce maintenance costs. The current system requires re-lamping on a two to four year cycle. LED fixtures do not require re-lamping but have other power supply components that may need to be changed during the service life depending on the specific fixture used.

#### LED Street Light Implementation

The main barrier to implementing LED street lighting is the initial cost of the LED fixtures. These costs have reduced significantly over time, and now are at the point where the overall life cycle cost of LED lighting is approaching that of the existing metal halide (MH) and high pressure sodium (HPS) technologies. Staff are now specifying the use of LED street lights where new road lighting systems are required on capital road projects and development projects.

The directional nature of LED lights also poses challenges when LED fixtures are retrofitted onto existing poles. The IESNA standards require certain light levels and uniformity of light for roadways, walkways and bikeways. Since LED lighting has different light distribution characteristics compared to the existing HPS or MH lights, many different LED fixtures may need to be evaluated before a suitable one is found. This challenge is reduced where entirely new lighting systems are installed, as the pole spacing can be adjusted somewhat to suit a specific LED fixture.

#### LED Street Lights in Richmond

There are approximately 100 LED street lights currently installed throughout the City. The most recent installation was completed as part of the No. 6 Road Widening project between Westminster Highway and Commerce Parkway. There are approximately 10,000 street lights in Richmond today.

Staff are also working with BC Hydro to implement LED street lighting improvements along some secondary roads in need of upgrades. Subject to final approval, the proposed locations include No.3 Road between Steveston Highway and Dyke Road, and Westminster Highway between No. 6 Road and Nelson Road. These sites include the installation of new street lights on BC Hydro poles. Since the City is required to pay for some of the operating costs associated with these new installations, staff pressed for the installation of high efficient LED lighting. After multiple discussions with BC Hydro and partially due to the work that City continues to undertake in regards to energy efficiency, BC Hydro has proposed that these lighting upgrades proceed as a pilot project with BC Hydro covering all the capital costs, which provides the City with significant savings. In consultation with the City, suitable LED fixtures will be chosen and installed by BC Hydro for each roadway and performance of the lighting will be jointly assessed. These projects will provide multiple benefits for the City on the roadways selected, including increased safety, improved lighting levels, and increased staff knowledge and hands on experience of LED fixture performance.

While the City is regularly approached by vendors, replacing existing street lights that are not at the end of their service life with new LED street lights is not cost effective at this time. With further advances in LED technology or significant increases to energy costs, this may change in the future.

#### Financial Impact

None at this time.

Based on current LED street light fixture pricing, the life cycle cost of a new LED street light is comparable to a new HPS or MH fixture.

#### Conclusion

LED street lighting provides an opportunity for the City to reduce its greenhouse gas emissions and assist in meeting its energy reduction goals while maintaining the required lighting levels and associated public safety. As this technology continues to mature, staff will continue to evaluate locations suitable for the use of LED street lights as well as update our design standards and construction specifications.

Milton Chan, P.Eng Manager, Engineering Design & Construction (604-276-4377)

#### Design Standards and LED Fixture Testing

The current Engineering Design Standards are based on the use of HPS or MH lamps, and do not specifically address the use of LED street lighting. These standards are being updated to include LED street lighting for new development. The City's Supplementary Specifications and Detail Drawings used during the construction stage are also being updated to reflect the use of LED street lights. The main update to the standards is as follows:

## 6.15 NEW LED ROADWAY LIGHTING LUMINAIRE PRESENTATION

The City of Richmond (COR) invites suppliers and manufacturers to submit and present to the City their LED roadway lighting luminaires. The luminaires must meet or exceed the current IESNA RP-8 Standard (American National Standard Practice for Roadway Lighting), COR Engineering Design Specifications, COR Engineering Department Supplementary Specifications and Detail Drawings and the Master Municipal Construction Documents.

For LED luminaire presentations the COR will require the following:

- Completed "COR Supplier Specifications and Details of Light Emitting Diode (LED) Roadway Lighting Luminaires" form (document is available on Richmond web site)
- IES photometric file for the submitted luminaire
- Lighting calculations using the recommended luminaire IES file (design criteria to be determined by COR at time of luminaire presentation)
- Sample luminaire (to be commercially available, no prototype unit)
- Upon COR request, supply 2 luminaires at no charge for testing purposes (luminaires will not be returned)

Suppliers seeking approval of their goods will be required to provide detailed information on each of their fixtures for staff to review. Once the initial submission is approved, lighting calculations are requested from the supplier and sample fixtures are requested for field testing.

Some of the key items that staff review are durability, rated lifespan, heat management, ease of installation, and performance characteristics.



# **Report to Committee**

То:	Public Works and Transportation Committee	Date:	May 5, 2014
From:	John Irving, P.Eng. MPA Director, Engineering	File:	10-6125-00/Vol 01
Re:	Legislative Changes: Update and Review – New <i>Water Sustainability Act</i> , <i>Federal Fisheries Act</i> Update and Ombudsperson Review		

#### Staff Recommendation

That the report titled "Legislative Changes: Update and Review – New Water Sustainability Act, Federal Fisheries Act Update and Ombudsperson Review" dated May 5<sup>th</sup>, 2014 from the Director, Engineering be received for information.

John Irving, P. Eng. MPA Director, Engineering (604-276-4140)

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:
APPROVED BY CAO	

#### Staff Report

#### Origin

This report provides an information update and review of the following legislation and processes: new Water Sustainability Act; amendments to the federal Fisheries Act; the British Columbia Ombudsperson's review of the provincial Riparian Areas Regulation and an overview of implications to the City.

In recent years, the City has witnessed an unprecedented rate of change to senior government legislation pertaining to environmental management. In many cases, the legislations overlap to a certain degree and changes to one can affect the others. With the number of changes taking place, lack of clarity can arise for both staff and project proponents in the City. Although, in many cases the regulations discussed are under development; staff is providing this update to Council to describe the scope of changes and how staff are responding.

#### Analysis

#### Province of BC Water Sustainability Act

On April 29<sup>th</sup>, 2014, the BC legislature passed the third reading of Bill 18 – 2014: Water Sustainability Act. This Act will replace the 105-year-old Water Act, and will make a number of changes in how freshwater resources in the province are regulated, allocated and managed. One significant change is the introduction of regulations on the extraction and use of groundwater for the first time in the province. The Ministry has indicated that regulations and the framework for new water fees and rentals (both of surface and groundwater extraction) will be established before the Act comes into effect in spring 2015.

Bill 18 repeals the majority of the Water Act and enacts the Water Sustainability Act to modernize the language of the Act. This modernization process includes a number of amendments to other existing Acts (e.g. Drainage Ditch and Dike Act, Fish Protection Act, Agricultural Land Commission Act, etc.) in order to streamline the Act.

The new Water Sustainability Act is broad-reaching at 140 pages. The Act's full effect will depend on regulations which have not yet been developed to support it. There are no changes to the "First-in-time, First-in-rights" system of water use allocations through water licensing, and there is suggestion that some regulations will not apply to existing licensees. The Act does allow for greater protection of watercourses with the opportunity to mandate minimum flows to better protect stream ecology and creates more protective language requiring water extractions for beneficial use to include the requirement for "efficient" use of water. The Act also provides increased powers for groups (including local governments) to develop "Water Sustainability Plans" to protect and manage a specific ground or surface water resource.

May 5, 2014

Bill 18 also makes concurrent changes to the Fish Protection Act, most notably changing the Act's title to the Riparian Areas Protection (RAP) Act. Sections of the former RAP Act have been moved to the Water Sustainability Act for clarity. The City's most significant interaction with the Riparian Areas Protection Act is through the previously established Riparian Areas Regulation (RAP), which remains unchanged.

Until the regulations for the Act are developed, City staff are unable to provide certainty regarding the full impact of the new Act. Examples that illustrate this uncertainty include the lack of clarity and scope for the new regulations regarding the maintenance of environmental flows for City drainage works or agricultural lands and how the new Water Sustainability Plans can protect surface and groundwater resources as they relate to sloughs and wetlands. Staff will continue to follow the progress of the Act, partake in upcoming consultation opportunities for the development of the associated regulation to reflect City interests and provide updates to Council accordingly.

#### Federal Fisheries Act 1985, Amended 2012

On June 29, 2012, amendments to the Fisheries Act received Royal Assent. The Act now focuses on productivity of recreational, commercial and Aboriginal fisheries. This is a major shift in approach; the previous regulation was based on a habitat management approach. The regulations establishing conditions for making regulations under subsection 36 (5.2) of the amended Fisheries Act were posted to the Canadian Gazette on April 23<sup>rd</sup>, 2014.

Since the announcement of the June 29<sup>th</sup>, 2012 Fisheries Act amendments there has been a withdrawal of Department of Fisheries and Oceans (DFO) staff from municipal Environmental Review Committee (ERC) processes. The previous ERC model provided a venue for DFO staff to attend regular meetings and facilitate efficient and timely approvals for City Capital, Operations and Development projects. As a result of this withdrawal local governments, including the City of Richmond, have been required to move to a triage approach based on an online application process. The move to this centralized delivery model, which depends heavily upon the opinion of qualified environmental professionals (QEPs) has already resulted in uncertainty for both City staff and project proponents. Staff have addressed this issue by working with colleagues across the region as part of their participation in the Municipal Environmental Managers Committee. This group has been successful in arranging dialogue with senior Department of Fisheries and Ocean staff to clarify roles and expectations. DFO staff have made it clear that municipalities should expect less direct support from the ministry and that the onus is now on the proponent of a project to ensure compliance with the Act.

Staff responded to the ERC withdrawal by proactively implementing a new process termed the Environmental Review Process (ERP) to facilitate an effective and efficient environmental review and approval process for City Capitol, Operations and Development projects. The ERP provided a continued opportunity for City staff to dialogue directly with proponents to address compliance and ensure that City interests were considered during senior agency approvals. The new DFO centralized triage system relies almost entirely on the opinion of QEPs and approvals for development affecting fish habitat may be granted by DFO based exclusively on this opinion, which may not reflect City priorities or management objectives (i.e. Richmond Ecological Network Management Strategy and Environmentally Sensitive Areas Management Strategy). In light of these changes and increasing uncertainty surrounding regulatory approach, City staff have retained the ERP to ensure that proponents are cognizant of the new DFO approval process, proponents and QEPs address City interests and City's ESA DPA requirements are followed.

#### BC Ombudsperson's review of the Riparian Areas Regulation (RAR)

The Province of BC established the Riparian Areas Regulation in 2006 under the provincial Fish Protection Act, with the objective to preserve streamside habitat in specific regional districts under development pressure. As Richmond is subject to the regulation, the City is obliged to provide protection for riparian areas as part of its bylaws and permits. RAR requirements are linked to the Fisheries Act as under the current regulation, DFO approvals are required for variances proposed to recommended watercourse setbacks. An Intergovernmental Cooperation Agreement (ICA) was created between the UBCM, DFO and the Province to outline each partner's responsibilities in delivering the RAR.

In response to public concerns regarding the Regulation's administration, the BC Ombudsperson launched a comprehensive review of the Provincial Riparian Areas Regulation (RAR). This is of significance to the City as municipalities subject to the RAR, including Richmond, will be affected by any changes proposed to the RAR arising from the review.

The Ombudsperson's report was released in April 2014 and contains 25 recommendations for improving the administration of the Riparian Areas Regulation and the fairness of its standards. These recommendations were made to the governing ministry for the RAR, the Provincial Ministry of Forests, Lands and Natural Resource Operations. The recommendations pertaining directly to local governments are Recommendations 1 through 3, all of which have been accepted by the Ministry.

# **Recommendation 1:** The Ministry of Forests, Lands and Natural Resource Operations review, by October 1, 2014, local government implementation of and compliance with the Riparian Areas Regulation and report publicly on the results of that review.

Implications for Richmond: The City adopted a unique approach to implementing the RAR through its Riparian Response Strategy (RRS) which pre-established development setbacks on relevant watercourses. Environmental Sustainability staff currently review all permit applications that are subject to the RAR to ensure compliance. Staff expect that they will be asked to work with Ministry staff to define City processes and the City's approach to Riparian Areas Regulation standards.

Note: City designated Riparian Management Areas are a separate designation to City designated Environmentally Sensitive Areas. A small portion of significant ecological riparian features such as City sloughs (i.e. Horseshoe and Bath Sloughs) and portions of the RMA along the West Dike have both designations to maximize protection opportunities.

**Recommendation 2:** The Ministry of Forests, Lands and Natural Resource Operations work with local governments to bring them into compliance with the Riparian Areas Regulation (RAR). If the ministry is not able to achieve full compliance by local governments with the RAR, the ministry should, by October 1, 2015, develop a mechanism to allow the ministry to require local government compliance with the RAR.

Implications for Richmond: Staff were already carrying out a review of the Riparian Response Strategy by assessing its post-implementation effectiveness with regard to watercourse protection, and a review of development and other activity in proximity to watercourses. Staff have also assessed the role of the associated Watercourse Protection and Crossing Bylaw (8441) in maintaining a robust drainage infrastructure. Based on the findings of this review staff have identified opportunities for improvements but have been awaiting the ombudsperson's review to be completed. For these reasons, staff are well placed to respond to any provincial review of the City's Riparian Areas Regulation approach.

**Recommendation 3:** The Ministry of Forests, Lands and Natural Resource Operations clarify the scope of the authority of local governments to vary streamside protection and enhancement areas in accordance with the Riparian Areas Regulation and, once it has done so, update the Riparian Areas Regulation Implementation Guidebook.

Implications for Richmond: This recommendation allows for the clarification of process where a proponent wishes to reduce the established development setbacks in the Riparian Response Strategy. This has been an ambiguous standard since the implementation of the RAR, and this recommendation will provide greater certainty to City staff and proponents.

Overall, the Ombudsperson's recommendations will provide for greater clarity and certainty for the City and development proponents.

#### **Financial Impact**

None at this time.

#### Conclusion

The recent legislative changes described in the report will likely have operational implications for the City; however in the case of the Water Sustainability Act the absence of supporting regulations makes this impact unknown at this time. Regulations and information supporting the amended Fisheries Act differ significantly from previous direction and have created confusion and additional workload in the interim while precedent is set. The Province has not yet indicated how it will respond to the Ombudsperson's report on the RAR beyond accepting their recommendations. It is

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likely staff will be requested to work with provincial staff to provide detail on the City's RAR response.

Staff will continue to monitor legislative changes and their implications to the City and report back when more information is available.

Sliv Olia

Lesley Douglas, B.Sc., R.P.Bio. Manager, Environmental Sustainability (604-247-4672)

LD:aa



То:	Public Works and Transportation Committee	Date:	May 9, 2014
From:	Tom Stewart, AScT. Director, Public Works	File:	10-6370-03-01/2014- Vol 01
Re:	Multi-Material BC Program - Post Collection Arrangements		

#### Staff Recommendation

- That the Chief Administrative Officer and General Manager, Engineering & Public Works be authorized to negotiate and execute an amendment to Contract T.2988, Residential Solid Waste & Recycling Collection Services with Sierra Waste Services Ltd. (in accordance with the May 9, 2014 Staff Report entitled "Multi-Material BC Program – Post Collection Arrangements" from the Director, Public Works (the "Staff Report)) to establish a recycling materials consolidation facility under the terms outlined in the Staff Report.
- 2. That additional funding for the consolidation facility in the amount of \$140,000 plus applicable taxes for one-time costs, and related service costs per tonne of approximately \$320,000 annually be approved, with funding from the Sanitation and Recycling provision.

Tom Stewart, AScT. Director, Public Works (604-233-3301)

Att. 1

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:
APPROVED BY CAO	

## Staff Report

#### Origin

At the April 28, 2014 meeting, Council considered the attached staff report (Attachment 1) regarding implementation of the Multi-Material BC recycling program. In approving a number of implementation items, Council also directed:

"That staff evaluate options, alternatives and costs associated with addressing the operational and logistical challenges associated with the current designated post-collection site for Richmond, and report back to Council."

This report addresses the referral and provides details and information on an approach to consolidate Richmond's recycling material for transport to the post-collection site.

#### Analysis

#### **Background**

The City joined the Multi-Material BC (MMBC) program to provide enhanced recycling services to residents commencing May 19, 2014. In the April 15, 2014 staff report, a concern was identified regarding the significant distance and travel time requirements to the designated post collection site for delivering Richmond's recycling materials (Cascades Recovery Inc./Green By Nature ["GBN"] at 12345 104 Avenue, Surrey). In accordance with Council direction on this issue, a letter has been sent to key representatives at MMBC expressing this concern and urging MMBC to establish a site in closer proximity to Richmond. Discussions between City and MMBC staff will continue separately on this important issue.

#### Post Collection via a Consolidation Facility

To manage the post collection aspect in the interim and to support the program launch on May 19, 2014, staff recommend materials be consolidated at a location in Richmond, and then bulked and transported to the GBN site in Surrey. This is the most cost-effective and efficient approach which will ensure no impact to service levels for residents. Otherwise, it would be necessary to add additional collection vehicles at significantly higher costs.

To establish the consolidation facility, it is proposed to add this service to the City's existing service contract with Sierra Waste Services Ltd. ("Sierra") with the following business terms:

- 1. Sierra Waste Services Ltd. will deliver all recycling materials to Urban Impact Recycling Ltd.'s ("Urban Impact") facility at 15360 Knox Way in Richmond.
- 2. Sierra will work with Urban Impact to create a distinct area at Urban Impact's facility for Richmond's recycling materials only (required to meet MMBC program requirements) with designated areas for the separate storage of paper, glass and mixed containers. The capital cost to the City for creation of this separate consolidation area is \$140,000 plus applicable taxes.

- 3. Sierra will arrange with Urban Impact to bulk load and then transport all Richmond recycling materials to MMBC's designated post-collection site, (i.e. Cascades Recovery Inc. located at 12345 104<sup>th</sup> Avenue, Surrey, BC), and require that MMBC requirements for material transportation, loading, unloading, weighing, record keeping, reporting of data, etc. be adhered to.
- 4. The terms of this arrangement will be for the period May 19, 2014 December 31, 2017 (to coincide with the expiry of the existing solid waste/recycling contract term), subject to cancellation upon 180 days termination notice provided by either party, or 180 days notice if the City no longer requires the consolidation facility at Urban Impact.
- 5. Payment of material consolidation and transportation costs based on a provided unit price per tonne, at a total estimated annual amount of \$320,000 (pro-rated 2014 amount of \$200,000). The City will pay this amount to Sierra, who will in turn contract with and pay Urban Impact directly.
- 6. In the event of termination of the consolidation facility arrangement, the City will be rebated a portion of the \$140,000 capital cost paid under Item 2, less a termination payment of \$1,460/month for each month remaining in the contract.
- 7. In the event of a change in the post-collection service arrangement (e.g. MMBC directed change in location, change in operational delivery requirements, etc.), this arrangement is subject to review and negotiation on mutual agreement between the City and Sierra.

This proposed consolidation arrangement will ensure that enhanced recycling services under the new MMBC program can be effectively launched on May 19<sup>th</sup>, and will ensure no negative impact to service levels for residents. The proposed arrangement also provides reasonable termination provisions to permit cancellation or adjustments based on continued discussions with MMBC regarding Richmond's concerns with the post-collection site they have designated for the City's recycling materials.

## **Financial Impact**

The proposed consolidation arrangement requires additional capital costs of \$140,000 plus applicable taxes, plus estimated annual amounts of approximately \$320,000 (pro-rated in 2014 to \$200,000). It is proposed that the funding source for these additional costs be from the sanitation and recycling provision.

## Conclusion

There are outstanding issues to be resolved with MMBC regarding the designated post-collection site for Richmond's recycling materials. These discussions will continue. In the interim, to ensure the new recycling program can be effectively launched on May 19, 2014, this report proposes that a consolidation facility be established in Richmond under the City's existing Residential Solid Waste and Recycling Collection Services contract with Sierra Waste Services Ltd. (Contract T.2988).

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Suzanne Bycraft Manager, Fleet & Environmental Programs (604-233-3338)

Att. 1: April 15, 2014 staff report, "Multi-Material BC Program Implementation"

# Attachment 1



#### **Report to Committee**

To:	Public Works and Transportation Committee	Date:	April 15, 2014
	Tom Stewart, AScT. Director, Public Works	File:	10-6370-03-01/2014- Vol 0 <b>1</b>
Re:	Multi-Material BC Program Implementation		

#### Staff Recommendation

- That the Chief Administrative Officer and General Manager, Engineering & Public Works be authorized to negotiate and execute an amendment to or replacement of Contract T.2988, Residential Solid Waste & Recycling Collection Services with Sierra Waste Services Ltd. (in accordance with the April 7, 2014 Staff Report entitled "Multi-Material BC Program Implementation" from the Director, Public Works (the "Staff Report")), to:
  - a) include acquisition, storage, assembly, labelling, delivery, and related tasks for the bags, containers and carts associated with implementation of the program changes and added recycling materials to be collected under the terms of the City's agreement with Multi-Material BC per Section 1, Item a) of the Staff Report;
  - b) remove the processing and marketing components from the scope of work and incorporate other changes described in Section 1, Item b) of the Staff Report, effective May 19, 2014;
  - c) modify the scope of work as described in Section 1, Item c) of the Staff Report to collect glass as a separate recycling stream, newsprint and mixed paper products as one combined stream, and collect an expanded scope of recycling materials as defined by Multi-Material BC as Packaging and Printed Paper for all residents serviced by the City for recycling services under Contract T.2988, effective May 19, 2014;
  - add administrative provisions to address the requirements of the contract with MMBC, as described in Section 1, Item d) of the Staff Report;
  - e) revise the annual contract amount to approximately \$6,391,841.26 (depending on contract variables such as required added equipment, inflationary and unit count increases), effective May 19, 2014.
- 2. That additional funding for the remaining portion of the 2014 Sanitation and Recycling budget be approved at the estimated amount of \$650,000 and that full program funding in the estimated amount of \$1,040,000 be included in the 2015 utility budget process for Council's consideration.

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- 3. That a letter be sent to Allan Langdon, Managing Director of Multi-Material BC (MMBC), expressing concern regarding the negative operational and financial impacts associated with the current designated post-collection site (located in Surrey) for Richmond's recycling materials, and that MMBC be urged to establish a site within closer proximity to Richmond.
- 4. That staff evaluate options, alternatives and costs associated with addressing the operational and logistical challenges associated with the current designated post-collection site for Richmond, and report back to Council.

Tom Stewart, AScT. Director, Public Works (604-233-3301) Att. 2

REPORT CONCURRENCE				
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER		
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REVIEWED BY STAFF REPORT / Agenda Review Subcommittee	INITIALS:	APPROVED.BXCAO		

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#### Staff Report

#### Origin

In November, 2013, Council agreed to join the Multi-Material BC (MMBC) program in order to provide enhanced recycling of paper and packaging materials for single family and multi-family residents, commencing May 19, 2014. This arrangement requires contractual amendments to the City's existing service contract T.2988 with Sierra Waste Services Ltd.

This report provides details on the required contractual amendments and provides a progress update on implementation activities.

#### Analysis

As background, the City has engaged Sierra Waste Services Ltd. under Contract T.2988 – Residential Solid Waste and Recycling Collection Services until December 31, 2017. In accepting the incentive offer from MMBC, the City is assuming the role of contractor to MMBC for the collection of recycling materials. However, Sierra Waste Services Ltd. will remain the City's contractor who provides the services on the City's behalf. From the public's perspective, the only apparent service related changes are the separate collection of glass, a change in sorting requirements for newspaper and mixed paper items, and an increase in the range of materials which will be accepted for recycling in both the blue box and blue cart (multi-family) recycling programs.

Contract T.2988 is a multi-service contract for curbside garbage, organics and large item collection services, as well as curbside/blue box and multi-family/blue cart recycling services. It is the eurbside and multi-family recycling services components of this contract that are impacted as a result of the City entering into an agreement with MMBC.

#### 1. Summary of Contractual Amendments Required to Contract T.2988

Changes impacting the City's agreement with Sierra Waste Services Ltd. are in the areas of start up costs, processing and marketing, expansion to the scope of work, and items of a general administrative nature.

a) <u>Start Up Costs</u>: To meet MMBC's requirements for the separate collection of glass, new receptacles are required for residents with blue box service and new carts are required for multi-family residents. To meet the May 19, 2014 launch date, it is recommended that Sierra Waste Services Ltd. acquire, store, assemble, label and deliver these items on behalf of the City. Delivery will also include related items developed and provided by the City (educational materials, re-usable recycling bags, etc.).

The change in sorting requirements and expanded scope of recycling materials to be added also necessitates that all multi-family recycling carts be re-labelled as part of educating and communicating new program information to residents. It is proposed that Sierra Waste Services also undertake the required cart re-labelling work on the City's behalf. The estimated cost of the start up cost items and associated activitics by Sierra Waste Services is up to \$520,000. Funding for these start up costs was previously approved by Council.

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b) <u>Processing & Marketing</u>: Under existing Contract T.2988, the City pays Sierra Waste for processing all recycling materials collected and the City is, in turn, paid commodity revenues for the sale of recycling materials based on commodity market pricing. Under the City's agreement with MMBC, MMBC now assumes all rights, revenues, etc. associated with processing and marketing all recycling materials (and have contracted Green By Nature to process and market these materials on their behalf).

#### As a result of this change:

- i. The processing and marketing aspects of the City's agreement with Sierra Waste Ltd. must be removed and the contractor be compensated for any resulting lost revenue;
- Provisions must be included to address changes by MMBC in the location of the designated processing facility;
- iii. Mechanisms to ensure a transparent and equitable process for the contractor to work with the City to identify alternative processing and marketing arrangements in the event of dissolution of the agreement with MMBC (i.e. MMBC contract stipulates a 180 day termination for convenience clause).

The noted changes result in increased costs to the City for contract compensation and lost opportunity for revenues from the sale of recycling commodities. This is outlined in the Financial Impact section of this report.

- c) <u>Expanded Scope of Work</u>: There are a number of requirements under the MMBC agreement which will result in changes to the scope of work under Contract T.2988:
  - Newspaper and mixed paper products will be combined into one "Paper Products" stream. This will necessitate that a separate, larger bag be provided to residents for placing all their paper items (replacing the current Blue and Yellow Bags). Existing collection vehicles must be modified to accommodate this combined paper products stream.
  - ii. Glass must now be collected separately. This will require that a new receptacle be provided to residents for separating their glass jars and bottles, and the contractor to modify the collection vehicles and collection process to collect the glass as a separate stream.
  - iii. Additional materials are being added to the program, which requires that additional equipment be added to accommodate the increased volume. A sample list of materials to be added to the program includes the following. A full list per the City's agreement with MMBC is contained in *Attachment 1*:
    - Paper and plastic drink cups
    - Milk cartons (including soy, rice milk and cream cartons)
    - Aseptic containers (soup, broth, sauce, etc. containers)
    - Plastic bakery trays and packaging (plastic cgg cartons, deli trays, muffin and sandwich containers, etc.)

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- Plastic pill bottles, including vitamins, personal care products, cosmetic containers, etc.
- Plastic pails, such as laundry detergent and ice cream buckets.
- Plastic lids and garden pots, plastic hinged containers (e.g. diaper wipes)
- Food and solvent spray cans, hairspray, deodorant, wax and polish spray cans
- Spiral wound cans (e.g. frozen juice, cookie dough, coffee, nuts)

At this early stage, it is difficult to predict the additional volume which will result from the significantly expanded range of items residents will be able to recycle. It is recommended that flexible and transparent language be incorporated into Contract T.2988 to be conservative but allow for additional equipment if required to meet volume demands.

The noted changes result in increased costs to the City for contract compensation associated with additional equipment requirements. A minimum of two trucks will need to be added, with the ability to add additional equipment or trucks at a rate to be negotiated with Sierra Waste Services Ltd. if required to meet volume demands in order to maintain service levels.

Associated costs are outlined in the Financial Impact section of this report.

- d. <u>Administrative Requirements</u>: The MMBC agreement contains a number of items where it would be prudent for the City to incorporate language in Contract T.2988 to identify avenues to address:
  - i. Changes requested by MMBC (which cannot be refused unless technically not feasible to carry out).
  - ii. Compliance with MMBC policies and standards.
  - iii. Contingency planning.
  - iv. Record keeping and reporting requirements.
  - v. Confidentiality requirements.
  - vi. Intellectual property proprietary rights owned by MMBC.
  - vii. Indemnity and insurance provisions.
  - viii. Service level failure credits.

The language will be structured in a manner that provides for transparency in addressing any potential items impacting cost, without transferring financial risk to the contractor. Any issues which arise that result in increased costs would be reported to Council for consideration.

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#### 2. Update on Implementation Activities

The MMBC program will be launched on May 19, 2014. A key factor that the City was only recently informally notified of (on April 7, 2014) by Green By Nature (the organization selected by MMBC to manage their post-collection system) is that the designated processing site for delivery of Richmond's recycling materials will be the Cascades Recovery Inc. site at 12345 – 104 Avenue in Surrey. This has operational and financial impacts beyond those projected in this report due to longer travel distances and delivery wait times than that currently required since the City's recycling materials are now delivered to Urban Impact on Knox Way in Richmond. This will also have further impacts to the terms and costs of the City's contract with Sierra Waste Services Ltd. beyond that identified in this report. Other impacts include increases emissions associated with longer travelling distances and idling/wait times.

With this information only recently being made available, staff will begin identifying potential alternatives and options for how to most efficiently and cost-effectively manage delivery of the City's recycling materials to the Cascades site. This information will be reported back to Council separately. In the interim, staff recommend that Council express the City's concern to MMBC about the distant location of the designated processing site for Richmond, and urge that MMBC establish a location in closer proximity to the City.

In terms of the May 19, 2014 launch date, a number of measures are underway in an effort to launch the City's program to coincide with the MMBC program implementation timeframe. This will mean three key changes for residents with both blue box and multi-family (blue cart) collection services as outlined below.

#### Residents with Blue Box Service

- a) Newsprint and Paper Products Now Combined: To accommodate the requirements of MMBC for a single paper stream, residents will be provided with a separate, larger yellow bag in which to place all their newsprint and paper products into a new "Mixed Paper" re-usable plastic bag. Residents may continue to use up any existing supply of blue and yellow bags or may bring these bags to the Recycling Depot to be recycled.
- b) Separate Collection of Glass Jars and Bottles: A separate, smaller grey box will be provided for residents to separate glass jars and bottles for recycling. Residents will be asked to place the grey box at curbside, along with their blue box and new yellow "Mixed Paper" bag on their recycling collection day. These receptacles will be emptied into a separate compartment on the recycling truck and returned to be re-used by residents.
- c) Expanded Materials Accepted for Recycling: Residents will be asked to place their remaining recycling materials PLUS the additional materials being added by MMBC in their existing blue box. Residents may use a second blue box, if required. Alternatively, taller/larger blue boxes (22 gallons vs. the 16 gallon capacity standard blue box) will be stocked and available at the Recycling Depot, should residents require or wish to use a larger capacity blue box to hold sufficient volumes of their recycling materials.

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These items, along with program educational material, are targeted for delivery to residents during the first two weeks of May. Collection of the new items will commence on residents' first collection day during the week of May 19<sup>th</sup>.

Attachment 2 contains an overview of the program changes for residents with blue box service.

#### Residents with Blue Cart Service

The program changes for residents with central recycling services in blue carts (multi-family) will principally mirror that of the blue box program:

- a) Newsprint and Paper Products Now Combined: Existing recycling carts currently for "Newsprint" and "Paper Products" will be re-labelled to combine both into "Mixed Paper" cart/s.
- b) Separate Collection of Glass Jars and Bottles: A separate (generally smaller) cart will be provided for the separate collection of glass. Consideration of the cart size provided will be based on estimated volumes, available space, etc.
- c) Expanded Materials Accepted for Container Recycling: The remaining carts will be relabelled for all remaining containers PLUS the new items being added through the MMBC program.

These changes will be undertaken commencing the first two weeks in May, with collection of the new materials commencing the week of May 19<sup>th</sup>.

The costs for the receptacles/one-time costs associated with MMBC program launch requirements are addressed in the Financial Impact section of this report.

#### **Financial Impact**

**One-Time:** The one-time costs for activities to be undertaken by Sierra Waste Services on the City's behalf (i.e. acquisition and delivery of boxes and carts associated with this implementation) are estimated at \$520,000. Council previously approved these funds from the Sanitation & Recycling provision (Project 41597).

**Operating:** As noted in this report, there are increased annual operating costs impacting the 2014 and future budgets for contracted as well as City costs. Total annual costs (based on 2014 rates and unit count data) are provided in the following table. These amounts will be pro-rated in 2014 to correspond with the planned May 19<sup>th</sup> commencement date of this program. These amounts are exclusive of applicable taxes. As previously noted, these costs do not include the impacts associated with the longer travel distances that will be required for delivery of Richmond's recycling materials to the designated processing site in Surrey. These costs could range anywhere between \$250,000 - \$750,000 annually, depending on whether a consolidation/ transfer facility can be arranged, or if multiple additional trucks will need to be added.

*MMBC Revenue:* Under the agreement with MMBC, the City is paid a market clearing price for providing services on behalf of MMBC (\$38.50/unit for blue box service, and \$23.75/unit for multi-family blue cart/central collection service). MMBC may deduct any service level failure **CNCL - 532** 

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credits and other amounts from their payment, however, none are assumed in the financial analysis which follows.

Description	Estimated Total Annual	2014 Projected Costs
		(Start Date May 19, 2014)
Financial Incentive		
MMBC Incentive	(\$2,316,242)	(\$1,440,512)*
Costs		
Additional Cost Items - MMBC		
Net Additional Contract Costs	\$454,409	\$282,605
City Costs	\$285,000	\$177,247
Loss of Commodity Revenue	\$300,520	\$186,899
Total additional Costs – MMBC	\$1,039,929	\$646,751
Current Recycling Net Fixed Costs	\$2,018,208	\$2,018,208
Total Costs under MMBC Agreement	\$3,058,137	\$2,664,959
(Total Additional Costs - MMBC plus Current Recycling Net Fixed Costs)		
Net City Costs	\$741,895	\$1,224,447
(MMBC Financial Incentive less Total Costs under MMBC agreement)		

\* These costs are prorated based on the MMBC program start date of May 19, 2014

Recycling Cost Comparison Under MMBC A	greement vs Existing N	ext Fixed Cost
Description	Estimated Total Annual	2014 Projected Costs (Start Date May 19, 2014)
Net City Costs	\$741,895	\$1,224,447
Total Existing Net Fixed Costs	\$2,018,208	\$2,018,208
Variance	(\$1,276,313) <sup>1</sup>	(\$793,761)
One Time costs		\$520,000
Net Cost Savings in 2014		(\$273,761)

<sup>1</sup>Based upon estimated volumes of recyclables collected and a local processor identified by MMBC.

As described in the table, by entering into agreement with MMBC, the City incurs additional expenses for contractual change requirements and loss of recycling material revenues. The City in turn receives a financial incentive from MMBC for providing the service on their behalf. The net result is that the City's costs, after the MMBC financial incentive, are expected to be approximately \$740,000 per year, which represents a savings of approximately \$1.27 million annually. Net cost savings in 2014 are modest due to the May 19<sup>th</sup> launch date and one-time implementation costs, or approximately \$273,000. These amounts are consistent with previous staff calculations.

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The costs identified above are reflective of program-specific costs for the blue box and multifamily recycling programs. They do not include other recycling programs and services provided by the City or existing staffing/administration costs.

#### Conclusion

This report highlights the operational, financial and contractual changes required to implement the City's agreement with MMBC effective May 19, 2014. Under this new program, residents will be asked to sort and prepare their recycling materials in a different manner, and will be able to recycle a significantly greater volume of materials. While there are cost increases associated with this new program, the City will receive incentive funding from MMBC through which the City's overall annual costs will be reduced by approximately \$1.27 million over existing costs. Savings in 2014 are not as significant due to the incentive not being received until launch (May 19, 2014) and as a result of start up costs associated with this program. These savings are exclusive of additional costs the City will incur associated with delivery of recycling program materials to the designated post-collection facility in Surrey. This matter will be further reviewed and reported back to Council.

Overall, the packaging and printed paper stewardship program (administered on behalf of industry by MMBC) is a progressive step to enhance producer responsibility programs for a greater range of materials. The City, by entering into agreement with MMBC for this program, will receive incentive funding from industry through MMBC to apply to the cost of operating these and other recycling programs in general. It is also an important step toward advancing waste diversion objectives, as the City and region work to achieve 70% waste diversion by 2015.

Suzanne Bycraft Mgr, Fleet & Environmental Programs (604-233-3338)

SJB:

Att. 1: List of Packaging and Printed Paper Items from MMBC Agreement 2: "To/From" Changes for Residents with Blue Box Service

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#### Attachment 1

List of Packaging and Printed Paper Items from MMBC Agreement

Category 1 – Printed PapersNewspapersDaily and community newspapersNewspaper InsertsNewsprint advertising inserts and flyersMagazinesDaily, weekly, monthly magazines; travel or promotional magazinesMagazinesRetailer product catalogues; automotive and rea estate guides/cataloguesCataloguesRetailer product catalogues; automotive and rea estate guides/cataloguesTelephone DirectoriesPhone books; newsprint directoriesOther Printed MediaNotepads; loose leaf paper; non-foil gift wrap White or coloured paper for general use, printer and copiersMiscellaneous Printed PapersBlank and printed envelopes; greeting cardsCategory 2 – Old Corrugated Cardboard (OCC)Old Corrugated CardboardOld Corrugated CardboardGrocery store/liquor store boxes; pizza boxesCategory 3 (a) – Other Packaging (containing liquids when sold)Paper Cup (hot) (polycoated liner)Paper Cup (hot) (col) (waxed)Non-foam paper cupsPaper Cup (cold) (waxed)Non-foam paper cups	
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liner)     Non-foam paper cups       Paper Cup (hot)     Non-foam paper cups       (biodegradable liner)     Non-foam paper cups       Paper Cup (cold) (waxed)     Non-foam paper cups	
(biodegradable liner)     Non-foam paper cups       Paper Cup (cold) (waxed)     Non-foam paper cups	
Paper Cup (cold) (2-sided Non-foam paper cups polycoated)	
Polycoated Milk Cartons Milk, soy, rice milk and cream cartons	
Aseptic Containers Milk, soy, rice milk, cream, soup, broth and sau containers, typically about 1 litre in size	ce
Multi-laminated Paper         Microwavable paper containers; paper bowls/cur           Packaging         for soup	ps
Category 3 (b) Other Paper Packaging (not containing liquids when sold)	
Old Boxboard (OBB) Cereal boxes; shoe boxes; tissue boxes; paper towel and toilet paper tubes; detergent boxes	
Wet Strength Boxboard Carrier boxes for soft drink containers; some frozen food paper packaging	
Moulded Pulp Egg cartons; formed coffee take out trays; pape based flower pots	r
Kraft Papers Paper bags	
Polycoated Boxboard Some frozen food packaging	

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### Attachment 1 (Cont'd)

Category 6 - Other Plastic Pa	ckaging	
PETE Bottles (non-beverage)	Salad dressing bottles; edible oil bottles; dish soap or mouthwash bottles; window cleaners	-
PETE Jars	Peanut butter containers; wide-mouth jars for nuts	
PETE Clamshells	Bakery trays; pre-made fruit and salad packaging; egg cartons	
PETE Trays	Single serve meals; deli and bakery items; housewares and hardware products	
PETE Tubs & Lids	Plastic lids for some containers	
PETE Cold Drink Cups	Take-out drink cups	
HDPE Bottles (non-beverage)	Shampoo bottles; milk jugs; spring water containers; bleach containers; vinegar containers; windshield washer fluid containers; pill bottles	
HDPE Jars	Personal care products; pharmaceuticals, vitamins and supplements containers	
HDPE Pails	Laundry detergent, ice cream pails	Pails for lubricants
HDPE Trays	Single serve meals; deli and bakery items; housewares and hardware products	
HDPE Tubs & Lids	Plastic lids for spreads and dairy containers	
HDPE Planter Pots	Plastic garden pots	
PVC Bottles	Water bottles; travel sized personal and hair care product bottles; household and automotive liquids containers	
PVC Jars	Peanut butter containers	
PVC Trays	Housewares and hardware products	
PVC Tubs & Lids	Plastic lids for some containers	
LDPE Bottles (non-beverage)	Hygienic, cosmetics and hair care	1
LDPE Jars	Cosmetic containers	
LDPE Tubs & Jars	Plastic lids for spreads and dairy containers	
PP Bottles (non-beverage)	Butter and margarine containers; translucent squeeze bottles; travel sized personal and hair care product bottles	
PP Jars	Cosmetic containers	
PP Clamshells	Hinged containers e.g. sanitary wipes	
PP Trays	Single serve meals; deli and bakery items; housewares and hardware products	
PP Tubs & Lids	Large yogurt tubs; kitty litter containers; ice cream containers	
PP Cold Drink Cups	Some cold drink cups	

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April 15, 2014

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#### Attachment 1 (Cont'd)

Material Type	Examples of PPP Accepted	Examples of PPP Not Accepted	
PP Planter Pots	Garden planter pots		
PS Bottles (non-beverage)	Pharmaceuticals, vitamin and supplements containers		
PS Clamshells (rigid)	Clear clamshell containers such as berry, muffin and sandwich containers		
PS Trays (rigid)	Clear rigid trays used for deli foods		
PS Tubs & Lids (rigid)	Dairy products tubs and lids		
PS Tubs & Lids (high impact)	Single serve yogurt containers		
PS Cold Drink Cups (rigid)	Clear rigid plastic drink cups		
PS Planter Pots	Some garden pots and trays		
Other <sup>1</sup> Plastic Bottles (non- beverage)	Bottles without a resin code or with resin code #7		
Other Plastic Jars	Jars without a resin code or with resin code #7		
Other Plastic Clamshells	Clamshells without a resin code or with resin code #7		
Other Plastic Trays	Trays without a resin code or with resin code #7		
Other Plastic Tubs & Lids	Tubs & lids without a resin code or with resin code #7		
Category 7 – Metal Packaging	ġ		
Steel Cans (non-beverage)	Steel dog food and vegetable cans; metal lids and closures		
Steel Aerosol Cans	Food spray cans		
Spiral Wound Cans (steel ends)	Spiral wound containers for frozen juice, chips, cookie dough, coffee, nuts		
Aluminium Cans (non- beverage)	Cat food and other food cans		
Aluminium Aerosol Cans	Air freshener, deodorant and hairspray containers; food spray cans; wax and polish spray cans		
Aluminium Foil and Foil Containers	Foil wrap; pie plates; aluminium food trays		
Category 8 - Glass Packaging	y		
Clear Glass Bottles and Jars (non-beverage)	Food containers; ketchup bottles; pickle jars; jam and jelly containers; cosmetic jars		
Coloured Glass Bottles and Jars (non-beverage)	Cooking oils, vinegar bottles, cosmetic containers		

<sup>1</sup> 'Other' plastic packaging is typically: manufactured from a combination of recycled resins; manufactured with a barrier layer; or, lacking a resin code mark

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Let's

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Attachment 2 Cont'd)

# YOUR EXPANDED BLUE BOX PROGRAM LET'S RECYCLE EVEN MORE!

Starting the week of May 19th, 2014, residents can recycle more household items using Richmond's Blue Box program. The newly expanded program includes multiple types of plastic containers, paper and plastic drink cups, milk cartons and flower pots, along with many more items.

We've made a few changes for easy recycling:

- Your NEW yellow Mixed Paper Recycling Bag is now for all paper products, including newspaper, cardboard and other paper
- Your NEW grey Glass Recycling Bln is for glass jars and bottles only
- Your Blue Box is for containers made from plastic, paper, tin and aluminium

Extra recycling? A larger Blue Box for containers is available at the Recycling Depot. Additional Mixed Paper Recycling Bags and Glass Recycling Bins are also available. Please call 604-276-4010 to order additional supplies, or pick them up at the following locations:

City Hall: 6911 No. 3 Road, open Monday to Friday from 8:15 a.m. to 5:00 p.m. Richmond Recycling Depot: 5555 Lynas Lane, open Wednesday to Sunday from 9:00 a.m. to 6:15 p.m.



April 15, 2014

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Attachment 2 (Cont'd)

# USING YOUR EXPANDED RECYCLING SERVICE

The following guide highlights the many items accepted in recycling, how to sort them using the Blue Box, yellow Mixed Paper Recycling Bag and grey Glass Recycling Bin.

MIXED PAPER RECYCLING BAG - COMBINE ALL NEWSPRINT & PAPER PRODUCTS TOGETHER



#### BLUE BOX FOR CONTAINERS - INCLUDES EXPANDED MATERIALS FOR RECYCLING

<ul> <li>Hewi Aerosol cans &amp; caps (food items, air fresheners, sharing cream, deodorant, hairspray)</li> <li>Newi Microwavable bowls, cups &amp; lids</li> <li>Newi Paper food containers &amp; cartons (ice-cream, milk). liquid whipping cream)</li> <li>Newi Plastic cold drink cups with lids</li> <li>Newi Plastic containers, trays &amp; caps (bakery containers &amp; deil trays)</li> <li>Item Plastic and paper garden pots &amp; trays</li> <li>Hewi Spiral wound paper cans &amp; lids. (frozen jaice, potato chips, cookie dough, coffee, nuts, baby formula)</li> <li>Aluminum cans &amp; lids</li> <li>Aluminum foid &amp; foid containers (foil wrap, pie plates, food tray, etc.)</li> <li>Plastic batte. &amp; caps (food item, condiments such latchup, mustard à relish, dish soap, moutiwash, shampcos, conditioners, etc.)</li> <li>Plastic battes à lids</li> <li>Thorans &amp; lids</li> </ul>	Remove labels     Remove food residue     Empty and rinse     Place in Blue Box	<ul> <li>X Aerosol cans that cany a hazardous waste symbol for corrosive, poison or flammable products</li> <li>X Aerosol cans that contained wases, polities, lubricating offs, solvents, insulating foam, pesticides</li> <li>X Cenamic plant pots</li> <li>X Containers for motor oil, or vehicle lubricant or was products</li> <li>X Foll-lined cardboard lick from take-out containers</li> <li>X Golden hoses</li> <li>X Plastic bags &amp; wrap</li> <li>X Flastic string or rope</li> <li>X Symoloam materials</li> </ul>

GLASS RECYCLING BIN - SEPARATE GLASS JARS & BOTTLES FROM OTHER CONTAINERS

ACCEPTED	HOW TO RECYCLE	NOT ACCEPTED
Vilewi Clear or coloured glass bottles & jars	Remove labels where possible     Remove labels where possible     Remove labels     Hempty & three     Place In Glass Recycling Bin	<ul> <li>× Glasses, dishes, coolonate, window glass: or mitros</li> <li>× Ceramicproducts</li> <li>Lids (place lids in Blue Box)</li> </ul>

For more information on Blue Box program recycling, and tips on how to reduce waste, visit www.richmond.ca/recycle.

PRINTED IN CANADA ON RECYCLED PAPER (100% POST CONSUMER CONTENT)

Issued: May 2014





# **Report to Committee**

Re:	Climate Action Revenue Incentive Program (CAI Implementation Strategy Reporting Update	RIP) & C	0.
From:	John Irving, P .Eng., MPA Director, Engineering	File:	10-6000-01/2014-Vol 01
То:	Public Works and Transportation Committee	Date:	April 30, 2014

#### Staff Recommendation

That:

- 1. Climate Action Revenue Incentive Program reports indicating the City's achievement of carbon neutrality in 2013, included as attachments in the staff report titled "Climate Action Revenue Incentive Program (CARIP) & Carbon Neutrality Reporting Update", dated April 30, 2014, from the Director, Engineering, be posted on the City's website.
- 2. Staff work with the Climate Action Secretariat, joint Provincial-UBCM Green Communities Committee, and other municipalities to refine carbon accounting methods that are part of the Carbon Neutral Progress Reporting and Climate Action Recognition programs.

John Irving, P.Eng. MPA Director, Engineering (604-276-4140)

Att. 5

REPORT CONCURRENCE	
CONCURRENCE OF GENERAL MANAGER	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS:
APPROVED BY CAO	

### Staff Report

### Origin

The initiative described in this report supports the following Council Term Goals:

- 8.1. Continued implementation and significant progress towards achieving the City's Sustainability Framework, and associated targets.
- 13.1. Use the City's website and other communication tools to inform and regularly update the Richmond Community on Council's Term Goals, plans, priorities and progress.

### Analysis

Significant progress has been made in developing policies and programs to reduce energy consumption from buildings and fleet activities. The City's Green Fleet Action Plan, adopted in 2013, aims to achieve a 21% reduction in GHG emissions by the year 2020. The Energy Management Program and revised High Performance Building Policy are ongoing tools that are focused on reducing energy consumption and GHG emissions through increased efficiency and greater use of renewable energy sources in civic buildings.

#### 2013 Corporate Carbon Emissions

Table 1 provides a summary of recorded emissions associated with buildings, civic infrastructure, and fleet activities for 2013; the reported figures adhere to the BC Ministry of Environment's methodology and guidance documentation and includes GHG reductions that resulted from the City's purchase of renewable natural gas. Table 1 also includes, for the first time, emissions from major contractors providing services on behalf of the City. Emissions for some contracted municipal services, namely waste and recycling collection, were not included in the 2012 reported contracted as they were not required to be reported. However, reporting contracted emissions is a pre-condition for achieving carbon neutrality. As such, the City's inventory includes contracted emissions from all sources. Attachment 1 provides more detail regarding specific emissions sources, as per Provincial reporting guidelines.

<b>Emission Sources</b>	<b>Tonnes CO2e</b>	Quantification Method
Emissions from services delivered directly by the local government	10,214	Derived from actual energy consumption and associated GHG emissions from stationary sources (buildings, lighting, and pumps) and mobile sources (fleet) used directly by the City.
Emissions from contracted services delivering municipal government responsible services	1,170	The BC government standard methodology and guidance for estimated contracted emissions, Option 3 (Vehicle/Equipment Type and Hours of Usage) was used to determine the contracted emissions value.
TOTAL	11,384	

Table 1: Emission Sources

### 2013 Carbon Offsets

Table 2 provides a summary of offsets (also known as credits) that the City expects to benefit from for the 2013 reporting year. Like 2012, offsets from diverted household organic waste, which are above the 2006 baseline, are eligible for credits. For the 2012 reporting year, as it was a new eligible source of offsets, the City was able to report credits that resulted in 2007 through to 2012, for a total of 3,157 tonnes. For 2013, the total reported amounts represent the amount of credits from diverted organics for 2013 only. Due the significant growth in diverted organics, there was a corresponding increase in carbon offsets in this year.

The City will also be able to claim additional offsets for GHG emissions that previously were not available prior to 2013. These offsets come from avoided emissions that result from the installation of a methane gas capture system at the Vancouver Landfill. Waste that originated in Richmond that is managed by Metro Vancouver translates to a corresponding offset allocation to the City of Richmond. Another new source of offsets relates to composting that occurs as a result of residents dropping off yard trimmings at EcoWaste. Since the City provides this free service to residents, but pays EcoWaste, these credits belong to the City. Like above, offsets that date as far back as the baseline year, 2006, through to 2013 can be reported. Going forward, only annual offsets will be reported. Staff used an offsets calculator provided by the Province of BC, Climate Action Secretariat. The calculator requires that a 3<sup>rd</sup> party validate the information provided. Staff are still pursuing the validation and have confidence in the numbers provided; staff will report back to Council if there is a change.

Offsets	Tonnes CO2e	Quantification Method
Household Organic Waste Composting – Municipally Collected	Estimated 2784	As quantified per Option 1 GHG Reduction Projects reporting methods.
Regional Vancouver Landfill Methane Gas Capture Credits	Estimated 7651	Richmond's credit allocation or credits earned from the capture of landfill gas (methane) at the Vancouver Landfill in Delta.
Household Organic Waste Composting – Yard Trimmings Dropped Off at EcoWaste	Estimated 4663	As quantified per Option 1 GHG Reduction Projects reporting methods.
TOTAL	Estimated <b>15,098</b>	

Table 2: Emission Offsets (Credits)

#### Carbon Neutrality & Offset Programs

Based on the above figures, it is staff's expectation that the City will be eligible for a "Level 3: Achievement of Carbon Neutrality" through the Climate Action Recognition Program. Staff are in the process of procuring 3<sup>rd</sup> party verification; if results change, staff will provide an update to Council on these results. If the above figures are confirmed, the City's carbon offsets will exceed its carbon footprint in 2013 by an estimated 3,714 tonnes. Unused carbon offsets can be banked for use in the following year.

In addition to the above offsets, the Province has just released a pilot "Avoided Forest Conversion Profile" carbon accounting methods which quantifies the carbon offsets that result from avoided deforestation. This quantification method will allow the City to claim carbon offsets for all or portions of the Northeast Bog Forest since by purchasing the land, deforestation for development or agricultural activities was avoided. As a result and depending on the completion of a full analysis, the City will be in a position to claim additional carbon offsets for 2013 or 2014. Staff will also review other recent conservation projects (e.g. Grauer Lands) to determine if they are eligible for carbon offsets for future years.

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Through staff's ongoing review and analysis of carbon accounting and reporting requirements, there is a growing concern that some of the methodologies developed by the Province are not fully acknowledging the amount of available carbon offsets or, in some cases, potentially penalizing cities for early actions (e.g. actions carried out prior to signing the Climate Action Charter that have potential for carbon offsets). Staff see an opportunity to engage the Province's Climate Action Secretariat to improve carbon accounting methods. In order to confirm Council's support for pursuing this engagement, this report includes a recommendation to this effect.

#### Towards Carbon Neutrality: Implementation Strategy – Richmond Carbon Marketplace Update

To help the City maintain carbon-neutrality in the future through investments in communitybased carbon offsets, Council approved the Richmond Carbon Marketplace pilot program in 2013. The pilot program was to be implemented through the following phased approach, with regular reporting back to Council on progress of each phase:

- Phase 1: Determine the Potential for Local GHG Reduction Projects (through outreach)
- Phase 2: Identify Potential Local GHG Reduction / Offset Projects
- Phase 3: Assessment and Quantification of local GHG Reduction Projects
- Phase 4: Achieving Carbon-Neutrality for the City of Richmond
- Phase 5: Continued Growth of Richmond's Local Low-Carbon Economy

Staff are currently in Phase 1 at this time and are actively working on a communications and outreach campaign for the Richmond Carbon Marketplace. Communication and outreach activities are being planned in tandem with the Richmond Energy Challenge outreach efforts, a program for building energy upgrades in existing buildings approved by Council on April 28<sup>th</sup>, 2014. Meetings with community-based organizations and businesses are scheduled for June. Approximately 8-10 non-profit groups and/or businesses will be engaged with face to face meetings. Development work on the "Request for Community Carbon Credits (RFC3)" and community web "hub", that includes a carbon offset self-assessment tool will be completed in time to coincide with the launch of the community outreach campaign in June. Once the RFC3 and the web "hub" are available, the City will further engage community stakeholders through workshops and direct marketing. It is planned to report back to Council on the results of the engagement campaign for the Richmond Carbon Marketplace by the end of the summer with a list of applicable community GHG emissions reduction projects.

### **Financial Impact**

None at this time.

#### Conclusion

The City of Richmond continues to meet its commitments as a signatory of the BC Climate Action Charter and is working towards Council's objective to become carbon neutral through investing in community projects. This effort includes the mandatory public reporting of GHG emissions and energy consumption from corporate operations. As such, the City's 2012 reports (Attachments 1-5) will be posted on the City's website to facilitate public access. For the 2013 reporting year and pending validation of staff's analysis, it is staff's expectation that the City will be recognized for carbon neutrality by the joint Provincial – UBCM Green Communities Committee and will have carry over carbon offsets for the 2014 reporting year.

Peter Russell Senior Manager, Sustainability and District Energy

(604-276-4130)

PR:pr

Attachment 1 Attachment 2 Attachment 3 Attachment 4 Attachment 5	Carbon Emissions Provincial Reporting Template - 2013 Climate Action Revenue Incentive Public Report for 2013 Interim Climate Action Revenue Incentive Public Report Attestation Contracted Emissions Estimation Template Draft - Option 1 GHG Reduction Reporting Template	REDMS# 4218420 REDMS# 4169179 REDMS# 4169007 REDMS# 4221715 REDMS# 4221722
Attachment 5	Draft - Option 1 GHG Reduction Reporting Template	REDMS# 4221722

10,272

10,304

410,145

298.29

21,121

15.74

24.32

15.51

61.25

1,068.43

11,383.52

Local Government Name:	The City of Richmond
Year:	2013
Contact Information:	
Name:	Andrew Nazareth
Position:	General Manager of Finance and Coporate Services
Telephone Number:	604-276-4095
Email address:	anazareth@richmond.ca

	urces:			
Building Fuel		Unit of Measure	Quantity	Emissions (tCO2e)
Electricity		КШН	46,199,347.00	1154.98
Natural Gas	· · · ·	GJ	112,341.39	5841.75
Mobile Emission Source	Contraction of the second s		Questita	Emissions (hCO2a)
Vehicle Class	Vehicle Fuel	Unit of Measure	Quantity	Emissions (tCO2e)
Vehicle Class Light Duty Vehicle	Vehicle Fuel Gasoline	Unit of Measure	58,937	137.09
Vehicle Class Light Duty Vehicle Light Duty Vehicle	Vehicle FuelGasolineDiesel	Unit of Measure	58,937 1,713	137.09 4.50
Vehicle Class Light Duty Vehicle	Vehicle Fuel Gasoline	Unit of Measure L L L L	58,937	137.09
Vehicle Class Light Duty Vehicle Light Duty Vehicle	Vehicle FuelGasolineDiesel	Unit of Measure L L L L L L L	58,937 1,713	137.09 4.50
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L

L

L

GJ

L

Propane

Gasoline

Natural Gas

Diesel

Diesel

Off Road Vehicle

Light Duty Truck

Heavy Duty Truck

Heavy Duty Truck

Off Road Vehicle

**Total Emissions (all Sources)** 

# Climate Action Revenue Incentive Program (CARIP) Public Report Climate Action Revenue Incentive (CARIP) Public Report for YEAR 2013

City of Richmond

Metro Vancouver



#### Report Submitted by Courtney Miller Sustainability Project Manager cmiller2@richmond.ca 604-276-4267

The City of Richmond has completed the 2013 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2013 and proposed for 2014 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG).

May 13, 2014

#### **General Information**

Name of Local Government	City of Richmond
Member of Regional District (RD)	Metro Vancouver
Regional Growth Strategy (RGS) in region	Yes
Population	205,000

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# **Community Wide Actions for 2013**

### **1.1 Measure**

**Community Wide Measurement Actions** 

Question	Have you been using the Community Energy and Emissions Inventory (CEEI) to measure progress? What else have you been using instead of/in addition to CEEI?
Answer	Yes

# 1.2 Plan

**Community Wide Targets** 

Question	Does your OCP(s) have targets, policies and actions to reduce GHG emissions, as per the requirements under the <i>Local Governments Act</i> (LGA)? If yes, please identify the targets set. If no or in progress, please comment.
Answer	Yes
Additional Information	The 2041 Official Community Plan (OCP) GHG emissions reduction targets are 33% below 2007 levels by 2020 and 80% below 2007 levels by 2050. The OCP also includes an energy reduction target of 10% below 2007 levels by 2020.

#### 1.3 Reduce

### Supportive Community Wide Actions

Action Type	Broad Planning
Actions Taken this Year	Continued implementation of the long-term Climate Change Response chapter of the OCP reducing GHG emissions and sequestering carbon. Policies and objectives include: protection and enhancement of the natural habitat; increasing the use of sustainable modes of transportation with the 2041 goal of increasing the mode share of transit, walking, and cycling by a combined 34%; and developing further densification, transportation, and sustainable building plans for shopping centres outside the City Centre. Continued implementation of the City Centre Area Plan (CCAP) directing the majority of City growth to the City Centre near Canada Line Stations. Updated the Steveston Heritage Strategy promoting increased transit usage, walkable neighbourhoods and energy efficient construction in the Steveston neighbourhood. Undertook BC Hydro funded neighbourhood energy study as part of Hamilton Area Plan and completed Community Implementation Offer project "Neighbourhood Energy Planning for Local Government Policy Makers."
Proposed Actions for Next Year	Continue to implement the OCP and CCAP. The citywide Community Energy and Emissions Plan and the Hamilton Area Plan—improving transit, promoting walkability, and planning for more energy efficient mixed-use and multi-unit residential buildings (MURB)—are anticipated to be adopted.

Action Type	Building and Lighting
Actions Taken this Year	Continued implementation of CCAP requirement that all rezoning applications with development over 2,000 m2 are equivalent to LEED silver standards. Continued to require District Energy Utility (DEU) ready development in the Alexandra neighbourhood of West Cambie. Developed Service Area Bylaw for the River Green District Energy Utility (RGDEU) to ensure mandatory connection of all new developments in the area to RGDEU. Formed District Energy Coordinator part time position.
Proposed Actions for Next Year	Continue to implement CCAP policies through new development applications. Develop higher minimum energy standard for City Centre and assess sustainability requirements for rezoning applications greater than 2,000 m2 outside of City Centre. Develop a long-term City Centre district energy strategy, update the heat load map to identify DEU project priorities, establish a mandatory DEU ready service area bylaw for City Centre and implement RGDEU Service Area Bylaw.

Action Type	Energy Generation
Actions Taken this Year	Completed due diligence phase for RGDEU design, construction, financing, and operation.
Proposed Actions for Next Year	Execute agreement with utility partner and develop implementation plan for the design, construction, financing, and operation of RGDEU. Complete pre-feasibility study that will explore opportunities to develop district energy node with renewable energy source(s) for the new aquatic centre, older adults centre, fire hall and existing buildings in the City Precinct area.

Action Type	Green Space
Actions Taken this Year	Completed the 2022 Parks and Open Space Strategy (POSS) with actions to support expanded walking, rolling and cycling networks, increased ecological connectivity and integration of green infrastructure within the parks and open space system.
Proposed Actions for Next Year	Develop the Urban Forest Management Strategy to consider GHG reduction. Continue to implement POSS and complete the Community Gardens Strategic Plan including proposed conservation of bog areas and agricultural uses.

Action Type	Transportation
Actions Taken this Year	Increased funding for walking, cycling and transit improvements consistent with OCP goals and targets. Expanded mandate of City bicycle advisory committee to include other forms of active transportation and supported education and encouragement programs (e.g. annual bike tour, Walk Richmond program and cycling education courses for students and adults). Facilitated expansion of car-share services in Richmond.
Proposed Actions for Next Year	Collaborate with TransLink to begin update of Richmond Area Transit Plan. Continue to forward education and encouragement programs for cycling and walking, implement transportation-related OCP policies and continue to support any interest in the expansion of car-share services.

### Action Type Waste

Actions Taken this Year	Completed annual report on waste reduction and diversion progress in conjunction with the Strategic Waste Program. Developed multilingual communications and outreach materials promoting recycling. Continued community engagement through workshops, theatrical shows at elementary schools, outreach displays and other events (e.g. Public Works Open House and Richmond Earth Day Youth (REaDY) Summit).
Proposed Actions for Next Year	Advance the Strategic Waste Program and implement initiatives to reach the adopted waste diversion target of 70% by 2015. Continue annual reporting on waste reduction and diversion progress and promote new recycling initiatives and pending disposal bans.

Action Type	Water/Sewer
Actions Taken this Year	Delivered water quality and conservation education through workshops and events (e.g. Public Works Open House, Project WET, H2Whoa!, Waterwise) and supported BC Water & Waste Association Drinking Water Week. Installed water stations at community events to promote high-quality tap water. Issued 852 rebates through the low-flow retrofit Toilet Rebate Program.
Proposed Actions for Next Year	Continue engagement events including education on tap water consumption and water sprinkling regulations. Continue Toilet Rebate Program and introduce redeveloped Rain Barrel Program.

# **Direct Community Wide Actions**

Action Type	Buildings
Actions Taken this Year	Implemented City Centre rezoning consideration for developments to be DEU ready with 8,000 DEU-ready units currently approved. Incorporated city-owned corporation Lulu Island Energy Company Ltd to manage district energy systems. Required 20% of MURB parking stalls to have 120V receptacles for EV charging and an additional 25% of stalls to be constructed to facilitate future installation (e.g. conduit for future wiring).
Proposed Actions for Next Year	Formalize and adopt DEU ready policy for all City Centre MURB development and create implementation plan to provide district energy service for North City Centre Area development. Continue to implement policies supporting the use of electric vehicles.

Action Type	Energy Generation
Actions Taken this Year	Provided ADEU service to second building (260 units).
Proposed Actions for Next Year	Provide ADEU service to third building (250 units) and commence Phase 3 to expand ADEU.

Action Type	Transportation
Actions Taken this Year	Completed mobility initiatives to promote sustainable modes of transportation including: construction of 350m of neighbourhood walkway and 300m of off-street multi-use path; addition of anti-skid surface at greenway-road intersections; upgrade of 3 crosswalks and 10 existing bus stops with accessible pedestrian features; expansion of bus stop benches and connecting pathways; implementation of traffic calming measures in school zones.
Proposed Actions for Next Year	Complete all outstanding 2013 transportation initiatives and implement the 2014 capital program which includes an increased number of projects from 2013.

Action Type	Waste
Actions Taken this Year	Introduced the Green Cart and large item pickup programs to 41,000 single-family and townhome dwellings. Commenced 15-month food scraps recycling pilot for 5,500 MURB units to inform design of full-scale program in 2015. Expanded Recycling Depot services to collect Styrofoam, batteries, cell phones, used books and plastic bags. Evaluated and improved recycling containers to ensure attractiveness and operability for use in public spaces. Engaged as a collection contractor with Multi-Material BC as part of the provincial product stewardship program.
Proposed Actions for Next Year	Undertake pilot to determine optimal cart sizing and collection frequency for waste and recycling. Obtain Council approval for full-scale MURB organics recycling program (30,000 units). Expand recycling under the Multi-Material BC stewardship program and continue intensive outreach to maximize recycling participation. Evaluate Recycling Depot expansion to an Eco-Centre model.

Action Type	Water/Sewer
Actions Taken this Year	Continued implementation of water metering program to include 69% single-family, 23% MURB units and 100% industrial and commercial properties. Subsidized 70 barrels through the Rain Barrel Program and supported implementation of Metro Vancouver water sprinkling restrictions.
Proposed Actions for Next Year	Continue to support water conservation initiatives and programs and advance implementation of the water metering program. Promote the redeveloped Rain Barrel Program.

Action Type	Green Space
Actions Taken this Year	Continued implementation of POSS including tree planting in parks and schools sites, maintenance of urban forest and addition of park spaces and facilities.
Proposed Actions for Next Year	Continue to implement POSS and capital program.

Question	Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments? Please describe and add links to additional information where possible.
Answer	Richmond is committed to increasing the share of walking and other modes of sustainable transportation. In order to support this effort and in anticipation of the needs of an aging population, the City is improving accessibility and walkability via implementation of an Accessible Pedestrian Signal (APS) program. To the City's knowledge, it is the only city of its size to commit to the upgrade of all City-owned signalized intersections and special crosswalks to include APS features. Currently, the City has 75 special crosswalks and 38 pedestrian signal locations with APS features. Approximately 25% of the City's 149 signalized intersections have APS features and completion of the program is anticipated by 2020.

# **Corporate Actions for 2013**

### 2.1 Measure

### **Corporate Measurement Actions**

Question	What steps has your local government taken toward completing its corporate emissions inventory?
Answer	Richmond established a corporate energy and emissions baseline of 2007, embedding it within its broader sustainability framework. The City has developed a database to track energy consumption of buildings and other assets, and the Green Fleet Action Plan adopted in 2013 improves its ability to manage fleet fuel use and related emissions.

Question	What tool are you using to measure, track and report on your corporate emissions?
Answer	Richmond is using a spreadsheet to meet requirements for this reporting year. The City is in the process of upgrading its energy tracking database to a platform that allows greater flexibility to meet multiple GHG reporting commitments.

## 2.2 Reduce

#### **Supportive Corporate Actions**

Action Type	Broad Planning
Actions Taken this Year	Continued upgrade of corporate energy use database and developed energy use targets for new infrastructure.
Proposed Actions for Next Year	Complete upgrade of corporate energy use database and define administrative procedures for improved energy performance of existing facilities. The revised corporate High Performance Building Policy including better than code energy performance for new buildings, no net increase of overall building energy and GHG emissions and a target of net zero and carbon neutral buildings by 2030 is anticipated to be adopted.

#### Action Type Building and Lighting

Actions Taken this Year	Completed energy demand profile for corporate buildings estimating long term baseline given population growth projections.
Proposed Actions for Next Year	Complete long term energy assessment and retro-commissioning plan for corporate buildings.

#### Action Type Energy Generation

Actions Taken this Year	Advanced opportunity review for corporate building projects.
Proposed Actions for Next Year	Complete Energy Strategy and Options Evaluation for new buildings in City Precinct.

Action Type	Transportation
Actions Taken this Year	Continued initiatives to encourage use of alternative modes of transportation for commuting and corporate travel including Bike to Work week promotion, corporate bike fleet and promotion of transit fare tickets and passes. Developed Green Fleet Action Plan to improve fuel efficiency, minimize overall environmental impact of equipment and vehicle operations and reduce GHG emissions 20% by 2020. Undertook best-in-class procurement of 44 fleet units, including units with highest fuel efficiency (tier 4 compliant models for excavator equipment, one electric forklift and two solar powered message board signs). Increased seating capacity of vans used in carpool program. Installed eleven electric vehicle charging stations for community and fleet use, and included anti-idling bylaw awareness in driver training and orientation.
Proposed Actions for Next Year	Continue to implement Green Fleet Action Plan actions including: demand side management; improved maintenance, monitoring and reporting; and alternative fuels. Explore expansion of employee carpool program, upgrade units upon replacement and support use of alternative modes of transportation for work related travel and other corporate initiatives.

Action Type	Water/Sewer
Actions Taken this Reviewed >100 pump electricity account listings and reconciled data for l Year	
Proposed Actions for Next Year	Upgrade energy use database to generate monthly reports of water and sewer energy consumption.

### **Direct Corporate Actions**

Action Type	Building and Lighting
ActionsCompleted City Hall, Community Safety Building, and South Arm, West Richmed Thompson Community Centres lighting retrofits. Replaced faulty couplings, er boiler and improved building envelope at Gateway Theatre to reduce natural i consumption. Upgraded Works Yard building controls to improve energy effici participant in the BC Hydro Workplace Conservation Awareness Program.	
Proposed Actions for Next Year	Complete major equipment replacement and upgrade at Richmond Ice Centre and Watermania. Complete lighting retrofits at Kwantlen building and three other suitable locations. Replace end-of-life gas fired rooftop units with efficient electric heat pumps. Develop and implement Workplace Conservation Awareness Program for Year 4.

Action Type	Energy Generation
Actions Taken this Year	Completed installation of solar thermal air wall at South Arm Community Centre.
Proposed Actions for Next Year	Complete installation of heat recovery system at Richmond Ice Centre to pre-heat ice flood water and optimize solar thermal energy system at South Arm Community Centre Pool. Complete Energy Strategy and Options Evaluation to identify appropriate renewable energy source(s) for City Precinct buildings.

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Action Type	Fleet
Actions Taken this Year	Undertook review of fuel management system and improved fuel security. Implemented tracking measures to establish baseline—correlating vehicle kilometres traveled with fuel consumption—and enable measurement of the effectiveness of new initiatives. Prepared for implementation of new fleet management software with business improvement processes and reviewed GPS systems for potential pilot program.
ProposedInitiate Fraser Basin Council E3 Fleet Certification and implement new fleet softwareActions formanagement system. Complete GPS pilot with 50 units to measure impact on fuelNext Yearconsumption and vehicle resource use efficiency.	

Action Type	Waste
Actions Taken this Year	Delivered 14 adult workshops on composting, harvesting compost, eco-cleaning, and related waste reduction and recycling strategies. Supported Climate Change Showdown and 2nd REaDY Summit for youth. Coordinated the delivery of two theatrical productions (Zero Heroes and Clean Up Your Act) to 10 elementary schools reaching 3,500 students and "Make Richmond Sparkle" show to 8 elementary schools reaching 850 students. Provided recycling services at community events and organized Green Ambassador Program with student volunteers contributing 1,500 hours to promote recycling.
Proposed Actions for Next Year	Expand food scraps collection at City facilities in conjunction with expansion of organics recycling services to MURB units.

Action Type Water/Sewer		
Actions Taken this Year	Continued upgrading corporate facilities with lower flow units (e.g. Minoru Arena and Gateway Theatre).	
Proposed Actions for Next YearContinue to implement corporate and departmental initiatives for more effic high-quality tap water.		

Action Type Green Space	
Actions Taken this Year	Completed Phase 1 of 5km Railway Greenway multimodal trail connecting neighbourhoods from the Middle Arm Dyke Trail to the Steveston Waterfront. Planted 1,200 trees on streets and in parks.
Proposed Actions for Next YearContinue to acquire land for parks and open space, begin construction of 4 acre neighbourhood park in City Centre and plant 800 trees on streets and in parks.	

# 2.3 Corporate Innovation

Question	Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments? Please describe and add links to additional information where possible.	
Answer	Richmond's long-term corporate energy use analysis indicates that, without additional action, building energy use will increase 25% by 2020. This projection informs the revised High Performance Building Policy target of no net increase in building energy use from 2012 levels. In addition to this target, the policy—to be considered by Council in early 2014—sets the direction for new corporate buildings to achieve energy performance of 24% better than code.	

# **Carbon Neutral Progress Reporting**

# 3.1 Carbon Neutral Progress Reporting

Emissions/Offsets	Tonnes CO2e
Annual corporate emissions using SMARTTool or equivalent inventory tool	11,384
Emissions from services delivered directly by the local government	10,214
Emissions from contracted services	1,170
Less: GHG reductions being claimed for this reporting year from Option 1 - GHG reduction project	2,784
Energy Efficient Building Retrofits and Fuel Switching	
Solar Thermal	
Household Organic Waste Composting	2,784
Low Emissions Vehicles	
Less: GHG reductions being claimed for this reporting year from Option 2 - GHG reduction projects	12,314
Option 2 Project A	4,663
Option 2 Project B	7,651
Sum of Other Option 2 Projects (if you have added projects below)	0
<i>Less:</i> Offsets purchased for this reporting year (Option 3). Please identify your offset provider in the offset provider information section below.	
Balance of corporate emissions for this reporting year.	-3,714
(If the corporate emissions balance is zero, your local government is carbon neutral for this reporting year)	
Additional "Option 2" Projects	
Option 2 Project C	
Option 2 Project D	
Option 2 Project E	
Option 2 Project F	
Option 2 Project G	. With Linkson
Option 2 Project H	

# 3.2 Making Progress on Your Carbon Neutral Commitment

Question	If your community has not achieved carbon neutrality for this reporting year please describe the actions that you intend to take next year to move you toward your carbon neutral goal.	
Answer		

# **3.3 Offset Provider Information**

Question	Please Identify the name(s) of your offset provider(s) (Please answer below):
Answer	
Question	The offsets being claimed in this CARIP Report were purchased from the offset provider(s) indicated above prior to making this CARIP report public (please indicate yes or no):
Answer	
Question	If your community has not achieved carbon neutrality for this reporting year please describe the actions that you intend to take next year to move you toward your carbon neutral goal.
Answer	

# Ministry of Community, Sport and Cultural Development

#### **CARIP Public Report Attestation Form**

The Purpose of this Attestation: As per the CARIP guidance, the Financial Officer is required to attest that the CARIP report submitted to the Province on or before March 7, 2014 has been made public <u>and</u> also indicate if it is the Final or *Interim* Report.

If applicable, the Financial Officer will also be required to attest that the local government's updated *Interim* CARIP report submitted on June 2, 2014 has been made public and is the Final Report. Please complete the attestation below that applies to your 2013 CARIP Public Report <u>at this time</u>. Please review the general CARIP Guidance document for more information on this requirement.

Financial Officer must complete and sign the APPLICABLE attestation form below and email a scanned copy to the province at <u>infra@gov.bc.ca</u>

#### FINAL CARIP Report attestation:

I declare that this is the Final 2013 CARIP Public Report for (*insert name of local government*) and that this report was made public on (*date*)

Name, Title (print) CFO	
Signature:	
Date:	

#### **INTERIM CARIP Report attestation:**

I declare that this is the Interim 2013 CARIP Public Report for (*insert name of local government*) and that this Report was made public on (*insert date*)

Additional carbon neutral information is needed to complete this CARIP Report and once that information is received; this CARIP report will be updated, made public and submitted as Final to the Province on or before <u>June 2, 2014.</u>

As per the CARIP Guidance document, I am aware that local governments that do not make public and submit an updated, Final 2013 CARIP Public Report to the Province by the **June 2, 2014**, deadline:

- <u>May not</u> be eligible for next year's CARIP grant.
- Will not be eligible for certain elements of the Green Communities Recognition Program, and
- Will not be included in the 2013 Provincial level report on local government climate action progress

Name, Title (print) CFO or CAO	LERRY (HONGE (FOR A NAZARETH)
Signature:	O-P
Date:	March 5, 2014

# **CARIP/Carbon Neutral Progress Report Reporting Year 2013**

# Supporting Documentation Contracted Emissions Template

#### LOCAL GOVERNMENT

City of Richmond 6911 No. 3 Road Richmond, BC V6Y 2C1

#### **PROJECT DESIGNATE**

Peter Russell, Sr. Manager, Sustainability & District Direct 604-276-4130 peter.russell@richmond.ca

#### RATIONALE

An estimation methodology for hired equipment contractor emissions is being utilized for 2013 since actual emissions for some contracts over \$25,000 have not provided fuel usage values.

The City has identified three main contract areas for delivery of traditional services:

- 1. Cascades Recovery Inc. and BFI provide recycling depot container collection and recycling services (T.4311);
- 2. Sierra Waste Services deliver residential solid waste and recycling services (T.2988);
- 3. BFI Canada Waste Management supplies of garbage containers and collection services at City facilities.

Each of these contracts was awarded prior to June 1, 2012 and are not required to be quantified as per BC government guidance. However, as the City is planning on achieving carbon neutrality for 2013, these contracted emissions have been included in our mobile fleet emissions reporting spreadsheet. With the exception of Cascades Recovery, fuel usage values were provided by the contractors and Provincial conversion factors were used to determine associated GHG emissions. For Cascades Recovery, fuel usage was estimated by from total kilometers driven.

The hired equipment contracted emissions, with the exception of equipment used outside of the defined traditional service boundaries or for capital rather than maintenance projects, is listed in the table below by traditional service area.

Option 3 is the estimation methodology used:

- 1. Hired equipment records sorted to exclude out of scope contracts;
- 2. City equipment operating records assessed to determine average consumption factors in litres per hour or kilometers driven for each equipment family;
- 3. Consumption factors used to estimated fuel consumption for hired equipment;
- 4. Environment Canada emissions factors applied to calculate GHG emissions.

CONTRACTED EMISSIONS Option 3: Vehicle/Equipment Type and Hours or Kilometers of Usage		
Traditional Service Area	Estimated Annual GHGs (tonnes)	
Drinking, Storm and Wastewater	56.8	
Solid Waste Collection, Transportation and Diversion	8.0	
Roads and Traffic Operations	173.1	
Arts, Recreation and Cultural Services	3.0	
Fire Protection		
Total	240.9	

# CARIP/Carbon Neutral Progress Report Reporting Year 2013

# Supporting Documentation GHG Reduction Project: Option 1 Reporting Template

#### LOCAL GOVERNMENT

City of Richmond 6911 No. 3 Road Richmond, BC V6Y 2C1

#### PROJECT DESIGNATE

Peter Russell, Sr. Manager, Sustainability and District Energy Direct 604-276-4130 <u>peter.russell@richmond.ca</u>

#### PROJECT INFORMATION

City of Richmond Project 1C: Household Organic Waste

The City of Richmond operates a curbside organics collection program to divert organic waste from the Vancouver Landfill.

The City of Richmond diverted a total of 14,237 torines of organics in 2013. Eligible diverted organics beyond the 2006 baseline translated into 2784 tonnes CO2e (to be verified) of offset.

#### **PROJECT TRANSPARENCY**

As a Green Communities Committee supported project utilizing Metro Vancouver reporting rationale, this project is understood to be:

- outside of the corporate emissions boundary;
- with GHG emissions counted only once;
- with the City of Richmond having ownership of the specified GHG reductions;
- with the emissions verifiable as having occurred following the release of the Climate Action Charter to the end of the 2013 reporting year;
- part of the City's Carbon Neutrality report that indicates the City is making progress towards its carbon neutral commitment.