

# CARIP/Carbon Neutral Progress Report Reporting Year 2015

## Supporting Documentation Contracted Emissions Template

<b>LOCAL GOVERNMENT</b>
City of Richmond 6911 No. 3 Road Richmond, BC V6Y 2C1
<b>PROJECT DESIGNATE</b>
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<b>RATIONALE</b>
<p>An estimation methodology for hired equipment contractor emissions is being utilized for 2015 since actual emissions for some contracts over \$25,000 have not provided fuel usage values.</p> <p>The City has identified four main contract areas that deliver traditional municipal services:</p> <ol style="list-style-type: none"><li>1. Cascades Recovery Inc. and BFI provide recycling depot container collection and recycling services</li><li>2. Sierra Waste Services provide residential solid waste and recycling services;</li><li>3. Progressive Waste Solutions provides waste and recycling collection services at City facilities.</li><li>4. Individual Hired Equipment.</li></ol> <p>Contractor emissions associated with the delivery of traditional municipal services by Sierra Waste Services and Progressive Waste Solutions have been included in our mobile fleet emissions reporting spreadsheet, as fuel usage and vehicle type information was provided for 2015. Contractor emissions associated with the delivery of services by Cascades Recovery and Hired Equipment were estimated by from total kilometers and hours driven, respectively.</p> <p>The hired equipment contracted emissions, with the exception of equipment used outside of the defined traditional service boundaries or for construction rather than maintenance activities, is listed in the table below by traditional service area.</p> <p>Option 3 is the estimation methodology used:</p> <ol style="list-style-type: none"><li>1. Hired equipment records sorted to exclude out of scope contracts;</li><li>2. City equipment operating records assessed to determine average consumption factors in litres per charge hour or kilometers driven for each equipment family;</li><li>3. Consumption factors used to estimated fuel consumption for contractor or hired equipment;</li><li>4. BC GHG emissions factors applied to calculate GHG emissions.</li></ol>

<b>CONTRACTED EMISSIONS</b>	
<b>Option 3: Vehicle/Equipment Type and Kilometers or Hours of Usage</b>	
<b>Traditional Service Area</b>	<b>Estimated Annual GHGs (tonnes)</b>
<b>Drinking, Storm and Wastewater</b>	<b>92.1</b>
<b>Solid Waste Collection, Transportation and Diversion</b>	<b>9.42</b>
<b>Roads and Traffic Operations</b>	<b>172.5</b>
<b>Parks, Recreation, Arts, and Cultural Services</b>	<b>9.12</b>
<b>Corporate Operations</b>	<b>77.1</b>
<b>Total</b>	<b>360.2</b>