

TO: Mayor and Councillors

FROM: Councillor Harold Steves

Date: Feb. 4, 2019-02-04

RE: Richmond State Of The Environment Report

At Parks Committee, Jan. 26, 2019 a referral was approved to prepare a "State Of The Environment Report" to meet the five year requirement of the Blue Dot programme which was adopted at Parks committee Sept. 24, 2014. And adopted by council Oct. 14, 2014 (1)

The first State of the Environment Report was prepared by the Advisory Committee on the Environment (ACE) and the City in 1998 (2) It was to be updated every five years.

The 2005 State of the Environment Report added climate change and Richmond's greenhouse gas emissions and recommended a programme to measure them (3)

In 2014 the State Of The Environment Report was called the "Sustainability Progress Report" and the main emphasis was on Richmond's "Climate and Energy Action" to compensate for human-caused greenhouse gas emissions (4) At the same time additional reports were prepared on Richmond's Ecological Network Strategy (2015), district energy, and many other issues. Dyking and sea berm plans to compensate for sea level rise were completed with the assistance of Dutch scientists.

RECOMMENDED:

That copies of various reports on the environment and climate change over the past few years be provided to council and Councillor Wolfes recommendations be adopted as amendments to the referral already approved by Parks Committee.

BLUE DOT

(1)

posted October 14, 2014

Model Municipal Declaration The Right To A Healthy Environment

Whereas the Municipality of Richmond understands that people are part of the environment, and that a healthy environment is inextricably linked to the well-being of our community;

The Municipality of Richmond finds and declares that:

1. All people have the right to live in a healthy environment, including:

The right to breathe clean air

The right to drink clean water.

The right to consume safe food.

The right to access nature

The right to know about pollutants and contaminants released into the local environment.

The right to participate in decision-making that will affect the environment

2. The Municipality of Richmond has the responsibility, within its jurisdiction, to respect, protect, fulfill and promote these rights.
3. The Municipality of Richmond shall apply the precautionary principle: where threats of serious or irreversible damage to human health or the environment exist, the MUNICIPALITY shall take cost effective measures to prevent the degradation of the environment and protect the health of its citizens. Lack of full scientific certainty shall not be viewed as sufficient reason for the MUNICIPALITY to postpone such measures
4. The Municipality of Richmond shall apply full cost accounting: when evaluating reasonably foreseeable costs of proposed actions and alternatives, the MUNICIPALITY will consider costs to human health and the environment.
5. By Dec 31st, 2015, the Municipality of Richmond shall specify objectives, targets and timelines and actions the Municipality of Richmond will take, within its jurisdiction, to fulfill residents' right to a healthy environment, including priority actions to:
 - a. Ensure equitable distribution of environmental benefits and burdens within the municipality, preventing the development of pollution "hot spots";
 - b. Ensure infrastructure and development projects protect the environment, including air quality;

- c. Address climate change by reducing greenhouse gas emissions and implementing adaptation measures;
- d. Responsibly increase density;
- e. Prioritize walking, cycling and public transit as preferred modes of transportation;
- f. Ensure adequate infrastructure for the provision of safe and accessible drinking water;
- g. Promote the availability of safe foods;
- h. Reduce solid waste and promote recycling and composting;
- i. Establish and maintain accessible green spaces in all residential neighbourhoods.

The Municipality of Richmond shall review the objectives, targets, timelines and actions every five (5) years, and evaluate progress towards fulfilling this declaration.

The Municipality of Richmond shall consult with residents as part of this process.

Introduction and Overview

This section covers three issues:

- Why a State of the Environment Report was written;
- How the report was written; and
- A summary of what we found.

1. Why the Report Was Written

Richmond has an attractive natural setting, surrounded by the sea, the Fraser River, and mountains. It includes some of Canada's most productive farmland and habitat for millions of migrating birds. Richmond also offers a high calibre of amenities for its human residents, including a quality network of parks and trails. Yet as more people settle in the Lower Mainland, our resources and quality of life could come under pressure —if we fail to change our consumption patterns. We need solutions to reduce this pressure and protect the things we value. *A State of the Environment Report can help us develop these solutions.*

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Richmond City Council and the Advisory Committee on the Environment recognize the value of State of the Environment (SOE)

reporting in monitoring Richmond's environmental health. They have provided the resources and time required to create this report. But this report is just the beginning —it forms part of a broader environmental management system that will be developed over time.

How the Report Fits Into the Environmental Management System

The first step in developing this system involves *clarifying our general priorities* for protecting those resources and reducing pressure on them. The second step is to *quantify the status of those resources and pressure points / stressors*. Both steps one and two were completed in creating this report (see Section 2 of this introduction for further detail).

The third step is to *set targets*, or describe an ideal scenario for our environment. The State of the

Environment Report prepares us for Step #3 by pointing out any targets we are already using, along with targets used in other cities. But more work is required to create a complete set of meaningful, achievable targets for Richmond. The fourth step involves *developing actions* to get us there. Some actions which will help us improve environmental management are already underway;

but once targets have been confirmed, new actions may be required to help us achieve them. The fifth step involves *monitoring the effectiveness of those actions*. If monitoring tells us the actions are working, we should continue them. But if the actions don't work, we can adjust them and then test them with further monitoring.

RRC-5: Greenhouse Gas Emissions

Why is this Indicator Important?

Greenhouse gas (GHG) emissions can accelerate the natural ‘greenhouse effect’ (which keeps heat in the earth’s atmosphere) and result in global climate change. Global climate change is expected to have serious impacts on our weather, meteorological and ecological support systems. Potential impacts of climate change include:

- sea level rise and increased flooding risk;
- more extreme weather events like storms, floods, and droughts;
- diminished water supplies;
- diminished fishery resources as a result of warmer oceans and rivers; and,
- diminished forestry resources as a result of increased incident of fire, insect outbreaks and disease.

• The major sources of greenhouse gases are from combustion of fossil fuels such as oil, natural gas or coal, and from the decomposition of organic wastes in landfills. Within Richmond, the primary GHG sources are the burning of natural gas and petroleum.

What is Being Measured?

No indicator was measured for this report as there is currently no reportable data available for Richmond. As Richmond develops its emissions baseline and forecast, there will be information with which to track GHG emissions in future years.

What is Being Done?

- Canada has committed in the Kyoto Protocol (which came into effect in 2004) to reduce total greenhouse gas emissions to 6% less than 1990 levels by 2012. The federal government has been developing actions and program funding to help industries, communities and individuals reduce their emissions.
- Municipalities have an important role to play as much of the GHG emissions are related to vehicles and housing - which can be influenced by municipal actions. In 2001, the City of Richmond joined the Federation of Canadian Municipalities’ Partners for Climate Protection Program. This program is a five milestone framework to define an emissions baseline, establish a forecast of future emissions, define a reduction target, and develop community plans to manage these emissions. Richmond is working to define a baseline emissions inventory and the information from this will be used to help create a forecast and reduction targets.

Summary

Status:

There is currently no complete indicator data of greenhouse gas (GHG) emissions for Richmond. The City is working to develop its GHG emissions baseline as part of the Partners for Climate Protection program.

Trend:

No trend data on GHG emissions in Richmond is currently available, but the growth in the population and associated increases in vehicle traffic, housing and commercial activities have likely resulted in increased total GHG emissions over the past several decades.

Outlook:

Unknown.

CITY TARGETS

Reduce community GHG emissions 33% below 2007 levels by 2020, and 80% by 2050.

Reduce community energy use 10% by 2020 below 2007 levels.

KEY DOCUMENTS:

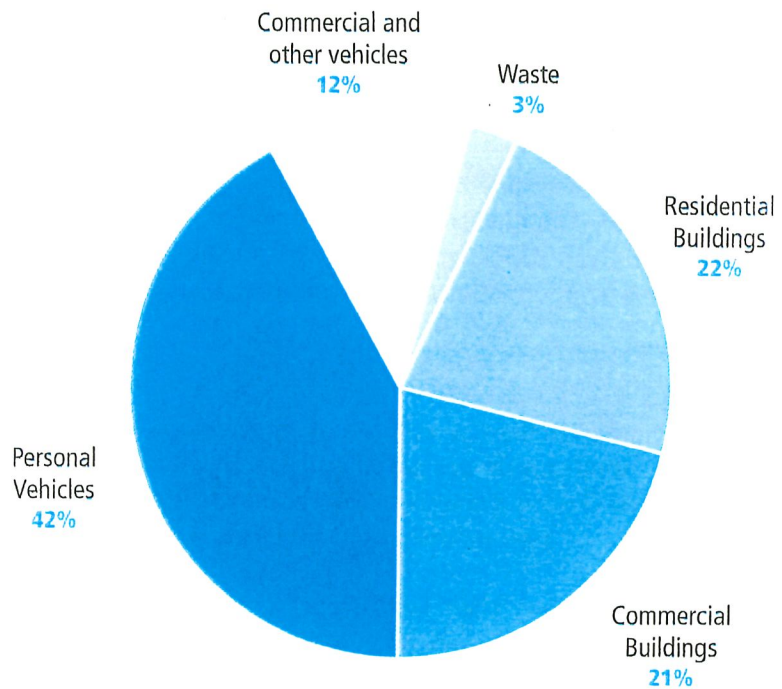
- 2041 Official Community Plan
- Community Energy & Emissions Plan
- Flood Protection Management Strategy

Climate & Energy Action

Human-caused greenhouse gas (GHG) emissions are changing our planet's climate. Communities around the world are acting to reduce the impacts of climate change while anticipating and adapting to a changing climate.

Richmond's 2041 Official Community Plan commits the City to aggressive GHG and energy reduction targets. Encouragingly, the energy actions the City is taking to address climate change will also improve Richmond's quality of life—moving away from fossil fuels to low carbon alternative sources of energy will make the air we breathe cleaner and our streets quieter and more pleasant. Designing walkable, bike and transit friendly neighbourhoods will support healthier lifestyles, and great neighbourhoods with convenient access to amenities. Improving our buildings' energy use can provide healthier indoor spaces while lowering households' and businesses' energy costs. Climate action is already creating a range of new opportunities for Richmond enterprises.

Richmond 2010 Community Emissions



ACHIEVEMENTS

2008	2012
<ul style="list-style-type: none"> City signs Climate Action Charter committing to carbon neutrality in corporate operations 2008–2031 Flood Protection Management Strategy 	<ul style="list-style-type: none"> Launch of Alexandria District Energy Energy and emissions targets adopted in OCP