

## **GREENEST CITY**

# 2020 ACTION PLAN 2014-2015 IMPLEMENTATION UPDATE

# DASH-BOARD

<sup>1</sup> The 2013 Green Jobs Study refined the definition and measurement of "green" Jobs (due to changes in data available from Statistics Canada), resulting in a change in the 2010 baseline count. Methods have been reviewed by Ernst & Young, and targets going forward will be based on this recalculated total.

<sup>2</sup> Emissions totals for baseline year (2,755,000 tCO<sub>2</sub>e), 2012 and 2013 have been revised due to updated Provincial Government guidance on how methane (which is emitted by waste decomposing in the landfill) acts as a greenhouse gas. Specifically, the global warming potential (GWP), which is the measure of how much heat a particular greenhouse gas traps in the atmosphere, has been updated. The new Provincial Guidance directs that the GWP of methane be updated from 21 to 25 to align with guidance released by the intergovernmental Panel on Climate Change in its Fourth Assessment Report. Carbon dioxide has a GWP of 1.

<sup>3</sup> 2014 emissions figure uses natural gas data from the most recent year available (2013). 2014 natural gas data was not made available by FortisBC in time for the publication of this report.

<sup>4</sup> Mode share totals for baseline year (40% of trips in 2008) was based on data gathered through a TransLink "Trip Dlary" survey that is conducted about once every five years. To obtain more regular statistics, the City began an annual survey of Vancouver residents that is slightly different in methodology but is believed to better capture the full range of travel by residents. This will be used to measure Green Transportation indicators going forward.

<sup>5</sup> Solid waste data is complied first at a regional level and then at the city level. As a result, Vancouver's data is always one year behind the reporting period.

<sup>6</sup> 5% of the city's land-base is industrial land area, and is not considered part of the target.

\* "People empowered to take action" are defined as those who are enabled by City-supported programs to change their lifestyle or are implementing a community project that helps Vancouver achieve its Greenest City goals as a result of support provided by a City-led or City-supported program. Examples include learning to preserve food or ride a bike in a community centre class, as well as people involved in projects supported by the Vancouver Foundation and City of Vancouver Greenest City Fund. The definition excludes people participating in a dialogue or consultation, attending an event, using infrastructure (e.g., bike lanes, food scraps collection), or receiving a personal incentive (e.g., home energy retrofits)

 Air quality metrics are measured by Metro Vancouver from data from two monitoring stations in Vancouver: one in Kitsilano and one at Robson Square. Four indicators of air quality are used for comparison to world standards. They are: 24 hour average particulate matter (PM 2.5) concentration >25 ug/m³, one hour average nitrogen dioxide (NO<sub>2</sub>) concentration >20 ug/m³, 24 hour average sulfur dioxide (SO<sub>2</sub>) concentration >20 ug/m³, and eight hour ground-level ozone (O<sub>2</sub>) concentration 52 ppb.
The BC Provincial government plans to set more stringent SO<sub>2</sub> and NO<sub>2</sub> objectives in the future, and Metro Vancouver will review its SO<sub>2</sub> objectives in 2015. New exceedances could occur next year, and air quality improvement remains a priority.

<sup>10</sup> Food assets include: number of community garden plots, farmers markets, community orchards, community composting facilities, community kitchens, community food markets, and urban farms.

GOAL AND TARGETS	INDICATOR	BASELINE	2014	CHANGE OVER BASELINE	IMPROVED OVER BASELINE	2020 TARGET
GREEN ECONOMY						
<b>Target 1:</b> Double the number of green jobs over 2010 levels by 2020.	Total number of green and local food jobs	16,700 jobs (2010)	19,900 jobs (2013) <sup>1</sup>	+19%	Yes	33,400 jobs
<b>Target 2:</b> Double the number of companies that are actively engaged in greening their operations over 2011 levels, by 2020.	Percent of businesses engaged in greening their operations	5% of businesses engaged (2011)	Survey to be conducted in 2016			10% of businesses engaged
CLIMATE LEADERSHIP						
<b>Target:</b> Reduce community-based greenhouse gas emissions by 33% from 2007 levels by 2020.	Total tonnes of community CO <sub>2</sub> e emissions from Vancouver	2,805,000 tCO <sub>2</sub> e (2007) <sup>2</sup>	2,610,000 tCO <sub>2</sub> e <sup>3</sup>	-7%	Yes	1,895,000 tCO2e
GREEN BUILDINGS						
<b>Target 1:</b> Require all buildings constructed from 2020 onward to be carbon neutral in operations.						
<b>Target 2:</b> Reduce energy use and GHG emissions in existing buildings by 20% over 2007 levels.	Total tonnes of CO₂e from residential and commercial buildings	1,145,000 tCO <sub>2</sub> e (2007)	1,085,000 tCO <sub>2</sub> e <sup>3</sup>	-5%	Yes	920,000 tCO <sub>2</sub> e
GREEN TRANSPORTATION						
<b>Target 1:</b> Make the majority of trips (over 50%) by foot, bicycle and public transit.	Per cent mode share by walk, bike and transit	4	50% of trips	4	4	50% of trips
Target 2: Reduce average distance driven per resident by 20% from 2007 levels.	Total vehicle km driven per person	5,950 km/ person/year (2007)	4,680 km/ person/year	-21%	Yes	4,760 km
ZERO WASTE						
<b>Target:</b> Reduce total solid waste going to the landfill or incinerator by 50% from 2008 levels.	Annual solid waste disposed to landfill or incinerator from Vancouver	480,000 tonnes (2008)	394,600 tonnes⁵ (2013)	-18%	Yes	240,000 tonnes
ACCESS TO NATURE						
Target 1: Ensure that every person lives within a five minute walk of a park, greenway or other green space by 2020.	Per cent of city's land base within a 5 min walk to a green space	92.6% (2010)	92.7%	+0.1%	Yes	95%6
<b>Target 2:</b> Plant 150,000 additional trees in the city between 2010 and 2020.	Total number of additional trees planted	(2010)	37,000 trees	+37,000	Yes	150,000 trees
LIGHTER FOOTPRINT						
<b>Target:</b> Reduce Vancouver's ecological footprint by 33% over 2006 levels.	Proxy: Number of people empowered <sup>7</sup> by a City-led or City-supported project to take personal action in support of a Greenest City goal and/or to reduce levels of consumption (cumulative)	600 people (2011)	10,700 people	+10,100	Yes	To be determined
CLEAN WATER						
Target 1: Meet or beat the most stringent of British Columbian, Canadian and appropriate international drinking water quality standards and guidelines.	Total number of instances of not meeting drinking water quality standards	0 instances	0 instances	0	Yes	0 instances
<b>Target 2:</b> Reduce per capita water consumption by 33% from 2006 levels.	Total water consumption per capita	583 L/person/ day (2006)	490 L/person/ day	-16%	Yes	390 L/person/ day
CLEAN AIR						
Target: Meet or beat the most stringent air quality guidelines from Metro Vancouver, British Columbia, Canada, and the World Health Organization.	Total number of instances of not meeting air quality standards for ozone, particulate matter (PM 2.5), nitrogen dioxide and sulfur dioxide from both the Kits and Downtown stations combined <sup>®</sup>	27 instances (2008)	0 instances <sup>9</sup>	-100%	Yes	0 instances
LOCAL FOOD						
Target: Increase city-wide and neighbourhood food assets by a minimum of 50% over 2010	Total number of neighbourhood food assets <sup>10</sup> in Vancouver	3,340 food assets (2010)	4,556 food assets	+36%	Yes	5,158 food assets

# PROGRESS HIGHLIGHTS

DECREASE -IN-VEHICLE KM DRIVEN PER PERSON SINCE 2007







BUILT IN 2014



INCREASE IN NEIGHBOURHOOD FOOD ASSETS SINCE 2010



275km of bike network in vancouver

DECREASE IN

SENT TO LANDFILL OR INCINERATOR SINCE 2008

ID WASTE

18%

# AWARDS

2015 World Wildlife Fund Earth Hour City Challenge: Canadian Earth Hour Capital

**Economist Intelligence Unit Global Livability Index:** 3rd Overall Globally, 1st in North America

**2015 Mercer Quality of Living Survey:** 5th Overall Globally; 1st in North America

**2015 Fast Company Smart Cities Index:** Pioneering Smart City

**2015 Mediacorp Canada Inc.:** Canada's Greenest Employers **2014 Global Green Economy Index:** 4th overall globally, 1st in North America

**2014 Government Green Fleet Award:** Greenest Municipal Fleet in Canada

**2014 Canadian Green Building Awards:** Award-Winning Project (for VanDusen Botanical Garden Visitor Centre)

**2014 Stewardship Centre for British Columbia Green Shores Gold Award** (for Jericho Marginal Wharf Restoration)

This update is organized according to the 10 goals of the *Greenest City* 2020 Action Plan, which can be found at: **vancouver.ca/GreenestCityActionPlan** 

# OVERVIEW

In 2011, Vancouver set a goal to become the greenest city in the world by 2020.

The Greenest City 2020 Action Plan (GCAP) aims to meet that goal by building a vibrant community, a thriving green economy, and a greener, healthier way of living, while preparing Vancouver for the potential impacts of climate change.

In 2015, Vancouver was once again named the Earth Hour National Capital by the World Wildlife Fund Earth Hour City Challenge: a testament to every resident, business and community group taking action through the hundreds of projects underway throughout the city. To date, we have achieved 80% of the original priority actions set in 2011, and are now in the process of preparing the next set of actions for 2015-2018.

This update outlines our achievements as a community, as we continue to support the dizzying array of talent and creativity in Vancouver that will help us move toward achieving our ambitious 2020 goals.

"The kind of change needed for all of us to thrive in healthy and prosperous communities requires a world full of

Greenest Cities."

From Greenest City 2020 Action Plan



## GREEN ECONOMY

## **GOAL:** SECURE VANCOUVER'S INTERNATIONAL REPUTATION AS A MECCA OF GREEN ENTERPRISE

#### TARGETS:

- Double the number of green jobs over 2010 levels by 2020.
- Double the number of companies that are actively engaged in greening their operations over 2011 levels by 2020.



INDICATOR	BASELINE	2014	CHANGE
Total number of green jobs	16,700 jobs (2010)*	19,900 jobs (2013)	+19%
Per cent of businesses engaged in greening their operations	5% of businesses engaged (2011)	Survey to be conducted in 2016	

<sup>\*</sup> The 2013 Green Jobs Study refined the definition and measurement of "green" jobs (due to changes in data available from Statistics Canada), resulting in a change in the 2010 baseline count. Methods have been reviewed by Ernst & Young, and targets going forward will be based on this recalculated total.

A study by Brand Finance estimates that Vancouver's brand is valued at \$31 billion due to its reputation as a "green, clean and sustainable" city.

## 2014-2015 SUCCESSES:

## LAUNCHED THE GREEN AND DIGITAL DEMONSTRATION PROGRAM

The new Green and Digital Demonstration Program (GDDP) will accelerate the pace of innovation, commercialization and job growth in Vancouver's clean technology and digital sector. The program, created in partnership with the Vancouver Economic Commission (VEC), provides opportunities for entrepreneurs and start-ups to test their innovations in the real world. Through the GDDP, participants are granted temporary access to City-owned assets-like buildings, streets, or vehicles-for demonstrations and proof-of-concept trials of their technology. Eight businesses are involved in the first intake of the program. One of them, Nanozen, won VEC's City Innovation Award for their work in developing a wearable particle sensor for real-time air-quality monitoring that would be especially useful in disaster response.

## ENGAGED BUSINESSES IN THE FALSE CREEK FLATS

The False Creek Flats (located between Main Street, Prior/Venables, Clark Drive, and Great Northern Way) makes up approximately 15% of Vancouver's remaining industrial land base. This area is home to more than 500 businesses and is transitioning from a traditional industrial zone into an area that showcases green innovation, features green buildings and smart infrastructure, supports sustainability-related industries, and attracts new impact investment.

In 2014 and early 2015, approximately 120 businesses participated in VECled workshops in and around the False Creek Flats, looking at ways to enable smart logistics, reduce barriers to innovative green business, and promote a shift to a circular economy where more materials and products are reused, repaired and recycled.

To further these goals, Habitat for Humanity Greater Vancouver, the Vancouver Foundation, and Sauder d.studio at the University of British Columbia partnered to find new paths for integrating deconstruction training and building material recovery into Habitat for Humanity ReStores. As well, Climate Smart worked with VEC to identify major sources of emissions from industrial operations in the Flats in order to help locate pertinent green solution providers and opportunities to encourage a shift to more sustainable business models.



#### SUPPORTED GROWTH IN CAR SHARING

Car sharing continues to grow as part of the green economy throughout Vancouver, providing increased access for people to live car-light lifestyles. Two-way car shares like Modo and Zipcar are growing at a considerable rate: 315 cars at the start of 2010 and 483 at the start of 2015-a growth of 37% in three years. One-way car share operators like Car2Go and the newly launched Evo, where you can pick up a car in one location and drop it off in a different location, have exploded in growth and popularity. By the start of 2015 there were 750 one-way car share vehicles, a remarkable growth of 240% in three years.

## **CHALLENGES**

Over the years, much of Vancouver's industrial space has transformed into residential neighbourhoods. This makes it difficult for emerging businesses to find flexible spaces to experiment, prototype and grow. Many start-ups are now collaborating and co-locating in order to solve this problem, with the benefit that working in close proximity to like-minded businesses helps incubate new ideas and highlights opportunities for collaboration. Preserving remaining industrial zones within Vancouver is a priority for the City, especially as we enter into the False Creek Flats planning process.

An additional challenge to the green economy is that the cleantech sector requires access to capital that is limited in Vancouver. The cleantech sector as a whole is in need of a program that will attract investors. The VEC is currently developing plans to address this deficiency.

"We give landfill-bound waste materials a second life by turning them into beautiful accessories and design objects. We love what we do and Vancouver provides a place where we can meet our aspirations and understand our strength as part of a vibrant network."

Theunis Snyman, Basic Design



## CLIMATE LEADERSHIP

## **GOAL:** ELIMINATE DEPENDENCE ON FOSSIL FUELS

#### TARGETS:

• Reduce community-based greenhouse gas emissions by 33% from 2007 levels. DECREASE IN COMMUNITY GREENHOUSE GASES SINCE 2007

INDICATOR	BASELINE	2014†	CHANGE
Total tonnes of community $CO_2e$ emissions	2,805,000 tCO <sub>2</sub> e (2007)*	2,610,000 tCO <sub>2</sub> e	-7%
from Vancouver			

tCO2e = tonnes of carbon dioxide equivalent (GHGs)

\* Emissions totals for baseline year (2,755,000 tCO<sub>2</sub>e), 2012 and 2013 have been revised due to updated Provincial Government guidance on how methane (which is emitted by waste decomposing in the landfill) acts as a greenhouse gas. Specifically, the global warming potential (GWP), which is the measure of how much heat a particular greenhouse gas traps in the atmosphere, has been updated. The new Provincial Guidance directs that the GWP of methane be updated from 21 to 25 to align with guidance released by the Intergovernmental Panel on Climate Change in its Fourth Assessment Report. Carbon dioxide has a GWP of 1.

<sup>†</sup> 2014 emissions figure uses natural gas data from the most recent year available (2013). 2014 natural gas data was not made available by FortisBC in time for the publication of this report. The GHG emissions from the bitumen exported during one week of a proposed expanded Trans Mountain pipeline would equal a whole year of emissions by all of Vancouver.

## 2014-2015 SUCCESSES:

## CONTINUED EXPANSION IN DISTRICT ENERGY NETWORKS

The City is gaining a reputation for innovation in the field of district energy: City staff were recently asked to lead a district energy working group for C40, an international network of large cities taking climate action. Our greatest success comes from the South East False Creek Neighbourhood Energy Utility (NEU), which reduced emissions of the buildings it serves by 60% using sewage heat recovery. Since 2010, the utility service area grew 260%, with 4.2 million square feet of buildings now connected and a 700,000 square foot increase since last year.

Plans for expansion of district energy systems continue. The highest priority strategy is converting the gas-fired steam systems that serve Downtown, Vancouver General Hospital, and the BC Children's and Women's Hospital. A secondary focus is to establish new networks in areas with sufficient population density to support low-carbon systems: Downtown, Central Broadway, the Cambie Corridor and the River District neighbourhood development.

## IMPROVED LANDFILL GAS CAPTURE

Methane is a by-product of landfill waste decomposition and a powerful greenhouse gas. We continue to make upgrades at the Vancouver Landfill and continue to improve how we capture this gas, which is then used to heat onsite buildings, nearby greenhouses and also generate electricity. In 2014, 505,000 tonnes of greenhouse gas emissions ( $CO_2e$ ) were captured: equivalent to taking over 126,000 cars off the road for a year.

## INTERVENED ON TRANS MOUNTAIN PIPELINE EXPANSION PROJECT

The proposed Kinder Morgan Trans Mountain Pipeline expansion would result in a seven-fold increase of oil tanker traffic, a significant increase in pipeline operating emissions and potential damage to our local waters and beaches from any oil spill. It would have major implications for air quality, greenhouse gases, health, safety and our environment. Additionally, there are potential economic impacts for

"The future of Vancouver's economy and livability will depend on our ability to confront and adapt to climate change, and moving toward renewable energy is another way that Vancouver is working to become the greenest city in the world."

Mayor Gregor Robertson



Vancouver, not only because of the risk of an oil spill, but also the risk of diluting or damaging the City's green brand, which is a draw for business and one reason Vancouver is consistently ranked one of the most livable cities in the world.

Over the last year, the City consulted with residents and took a strong stand to protect the environmental integrity of the region. As an intervenor, the City put forward over 1,000 questions to Trans Mountain and formally challenged the hearing process, which excluded the upstream and downstream climate change impacts of building the pipeline from being considered. The City continues to raise awareness around the climate and environmental consequences of an increase in tar sands production. Also, evidence developed by the City shows that the market for high-emitting tar sands products will be threatened, especially as other nations move to take action to limit global warming to less than 2°C above pre-industrial levels. The pipeline would become a stranded asset, unlikely to be used or useful over the long-term.

## **CHALLENGES**

There is little to no action on climate change at the federal level in Canada. Provinces and cities are taking on the task of making meaningful changes to ensure we mitigate, and adapt to, the impacts of climate change.

The Trans Mountain Pipeline review process as facilitated through the National Energy Board (NEB) has not enabled Vancouver residents to participate and has not included a review of climate impacts of the project. Economic benefits were considered in the hearings, but upstream and downstream impacts of the pipeline expansion were not. Many of the 2,000 people and groups that applied to speak at the hearings were turned down. Intervenors were given only four weeks to review a 15,000 page application that the NEB itself took months to review.





**GOAL:** LEAD THE WORLD IN GREEN BUILDING DESIGN

• Require all buildings constructed from 2020 onward to be carbon neutral in operations.

AND CONSTRUCTION

TARGETS:

• Reduce energy use and greenhouse gas emissions in existing buildings by 20% over 2007 levels. 15% BETTER ENERGY PERFORMANCE -REQUIRED IN-OFFICE & COMMERCIAL BUILDINGS

INDICATOR	BASELINE	2014*	CHANGE
Total tonnes of CO <sub>2</sub> e from residential and	1,145,000 tCO2e (2007)	1,085,000 tCO <sub>2</sub> e	-5%
commercial buildings			

tCO2e = tonnes of carbon dioxide equivalent (GHGs)

\* 2014 emissions figure uses natural gas data from the most recent year available (2013). 2014 natural gas data was not made available by FortisBC in time for the publication of this report. The Vancouver Building By-Law is already recognized by the World Green Building Council as a world leading green building policy. The City's 2014 energy efficiency requirements for new buildings on rezoned land are even more progressive, exceeding By-Law requirements by a further 22%.

## 2014-2015 SUCCESSES:

#### ADOPTED A COMPREHENSIVE RETROFIT STRATEGY

Adopted by Council in June 2014, the Energy Retrofit Strategy for Existing Buildings aims to reduce greenhouse gases that result from energy use in buildings that already exist. The strategy focuses on buildings in four target sectors: detached houses, large multiunit residential buildings (MURBs), large commercial and large industry. These sectors collectively cost nearly \$500 million to heat and power and produce 800.000 tonnes of emissions each year. The Energy Retrofit Strategy will catalyze and support voluntary improvements in these sectors, using energy benchmarking and energy audits, by promoting retrofit incentives and through retrofit requirements in Vancouver's Building By-Law.

#### UPDATED VANCOUVER'S BUILDING BY-LAW

Vancouver's ability to adopt its own building by-law is unique in British Columbia. Adopting unique by-laws allows the City to respond quickly to safety issues and to be a leader in the realm of building regulations. On April 1, 2014, Council enacted the 2012 British Columbia Building Code with additional requirements and revisions specific to Vancouver. Developed in consultation with industry professionals, the new by-law took effect January 1, 2015. It includes amendments to improve housing for seniors and people with disabilities and supports the greening of Vancouver's building stock by increasing the requirements for energy efficiency in new buildings, while also requiring buildings undergoing renovations to reduce their energy use.



## ENSURED FURTHER EFFICIENCY THROUGH REZONING POLICY

The Rezoning Policy provides another opportunity to improve energy efficiency in the built environment, building-by-building. In June 2014, the rezoning policy was updated to promote connection to future low-carbon neighbourhood energy utilities. The updated policy will now also recognize energy efficiency programs, such as an EnerGuide 84 rating requirement for townhouses and residential buildings of up to four stories, and the rigorous Passive House standard. Currently. Vancouver's Rezoning Policy exceeds the Vancouver Building By-Law by 22%, meaning that new buildings have to be that much more efficient if they are built on rezoned land.

## **CHALLENGES**

Energy benchmarking is a low-cost practice that enables building owners to identify savings opportunities. A study by the US EPA shows benchmarking resulted in an average 7% reduction in energy use of participating buildings over a three-year period. However, this type of data is unavailable to the City, making it challenging to identify and support buildings with the biggest opportunities for improvement. Provincial amendments to the Vancouver Charter, Local Government Act and the Community Charter are required to ensure annual reporting of building energy use data by building owners. Fortunately, the Province has passed legislation that enables the creation of "opt-in" benchmarking regulations for local governments. The City sponsored a Union of BC Municipalities resolution on energy benchmarking to petition the Province to make these changes. The City is also working with utilities to resolve remaining privacy and data access issues.



## **GREEN TRANSPORTATION**

## **GOAL:** MAKE WALKING, CYCLING, AND PUBLIC TRANSIT PREFERRED TRANSPORTATION OPTIONS

#### TARGETS:

BOWNTOW

• Make the majority (over 50%) of trips by foot, bicycle, and public transit.

• Reduce average distance driven per resident by 20% from 2007 levels.



INDICATOR	BASELINE	2014	CHANGE
Per cent mode share by foot, bike and transit	*	50% of trips	*
Total vehicle km driven per person	5,950 km/person/year	4,680 km/person/year	-21%

\* Mode share totals for baseline year (40% of trips in 2008) was based on data gathered through a TransLink "Trip Diary" survey that is conducted about once every five years. To obtain more regular statistics, the City began an annual survey of Vancouver residents that is slightly different in methodology but is believed to better capture the full range of travel by residents. This will be used to measure Green Transportation indicators going forward. As of April 2015, 50% of all trips taken in Vancouver are by foot, bicycle or transit.

## **2014-2015 SUCCESSES:**

## ENHANCED EXPERIENCE FOR WALKING

Vancouver has seen a city-wide increase in walking as a way of getting around. Following the completion of the Hornby Street protected bike lane, foot traffic increased 20%, and cycling on the sidewalk decreased by 80%, demonstrating that creating complementary systems enhances safety for everyone. Pedestrian use along the Seaside Greenway has also increased. To help make travelling by foot in Vancouver even easier, 210 wayfinding map stands were updated or installed throughout Vancouver in 2014.

The City's VIVA Vancouver program continues to enliven Vancouver by turning street spaces into pedestrianized public places. Parklets have sprung up throughout the city: in the Mount Pleasant, South Hill, Commercial Drive and Downtown neighbourhoods with a sixth one coming soon in Kitsilano. VIVA also hosted the second design-build challenge in 2014 for the temporary public space at 800-block Robson Street downtown through its Robson Redux competition, and garnered 81 submissions from around the world. 97% of passers-by reported that Robson Redux enhanced their pedestrian experience.

## MEASURED RECORD INCREASES IN CYCLING

This year, the Burrard Bridge bike lane marked its fifth year in use, seeing more than five million trips since installation in 2009. In summer 2014, the Burrard Bridge bike lane broke bike traffic records with 195,000 bike trips in July alone, up 21% from the previous year. Following construction and improvements, weekday bike path use numbers along the Seaside Greenway jumped as well, to 2,700 trips daily by August 2014, compared to 600 in August 2012 before construction began. Downtown, the Hornby Street separated bike lane also hit record numbers in summer 2014, with 71,000 cycling trips compared to 68,000 trips in 2011. In July 2014, the Dunsmuir Street and Viaduct bike lanes saw the second highest months on record.

Now, more than ever, people are choosing more sustainable options for getting around the city. Half of all trips made in Vancouver are by foot, bike and transit, and the City has reached our 2020 target of 50%.



## ADVOCATED IN METRO VANCOUVER'S TRANSIT PLEBISCITE\*

In February 2014, the Minister of Transportation and Infrastructure asked the Metro Vancouver Mayors' Council on Regional Transportation to confirm its transportation vision and to clarify the costs, priorities, and phasing for investments and actions. Then, in early 2015, Vancouver took part in a Transportation and Transit Plebiscite in which residents across the region voted either for or against a 0.5% sales tax increase to support a progressive and comprehensive transportation plan spanning the next 30 years.

For Vancouver, a positive result would give us the ability to take steps toward improving our transportation network and building a tunnelled extension of the Millennium SkyTrain line through what is the second busiest economic area in BC and the busiest bus corridor in North America-the Broadway Corridor. As the region grows by one million people over the next 30 years, and more commuters come to work and play in Vancouver from neighbouring cities, this subway extension is crucial to ensuring transportation-related emissions are kept low and that people are kept moving.

## **CHALLENGES**

The future of transportation throughout the region will be impacted by the results of the Transportation and Transit Plebiscite. In the event of a "yes" vote, the City will work with other levels of government to secure the additional funding needed to finalize the vital Millennium Line SkyTrain extension and other transportation measures.

If the result is negative, the City will have to seek a Plan B to realize an extension of the SkyTrain. This corridor is the busiest bus corridor in North America, with over half a million passengers passed by every year. With almost 50% of trips beginning outside of Vancouver, this corridor will get even busier as the Evergreen Line extension (which extends the SkyTrain into the suburb of Coquitlam) brings more passengers into the city.

<sup>\*</sup> The outcome of the Plebiscite was unknown at time of publication.





## ZERO WASTE

## **GOAL:** CREATE ZERO WASTE

#### TARGETS:

• Reduce solid waste going to the landfill or incinerator by 50% from 2008 levels.



INDICATOR	BASELINE	2014*	CHANGE
Annual solid waste disposed to landfill or incinerator from Vancouver	480,000 tonnes (2008)	394,600 tonnes* (2013)	-18%

In 2014, nearly 50,000 tonnes of organic waste was diverted from the landfill.

## 2014-2015 SUCCESSES:

## BANNED ORGANICS FROM LANDFILL

In early 2015, Metro Vancouver placed a regional ban on the disposal of food scraps in the garbage. In preparation for this, over the last year 93% of Cityserviced multi-unit residential buildings switched over to the City's Green Bin program for organics. The City also worked with buildings that are serviced by private haulers to start an organics disposal program for their buildings. A regional awareness program, led by Metro Vancouver and supported by the City helped spread the word that "food isn't garbage!"

## EXPANDED RANGE OF RECYCLABLE MATERIALS

As of May 2014, materials such as milk cartons, Tetra Paks, paper cups, ice cream tubs and paper/metal containers such as frozen juice cans can go into the City's curbside recycling program. Additionally, Styrofoam and plastic bags can be dropped off for recycling at the City's depots. Expanded recycling helps divert more waste from the landfill and is a key strategy for meeting the City's Zero Waste goal. This expansion was rolled out in part because of the Multi-Materials BC program, which shifts the responsibility for recycling packaging and paper to the businesses that produce the materials. Programs like this and other extended producer responsibility (EPR) programs help change the way producers do business by driving "cradle-to-cradle" product development.

## SUPPORTED NEW GREENHUB FACILITY

More than 50.000 bottles have been dropped off daily since GreenHUB opened in July 2014. The new facility—a collaboration between Recycling Alternative and United We Can-processes hundreds of tonnes of recyclables each month and runs its vehicle fleet on biodiesel. The collaboration improves the efficiency of both operations through shared space and resources. This unique pairing of a local business and a social enterprise represents an innovative co-location model for industrial operations in Vancouver. GreenHUB is one of many green businesses now located in the False Creek Flats

## MANDATED DECONSTRUCTION AND WOOD WASTE RECYCLING

As part of the Heritage Action Plan, the Green Demolition By-Law was approved in June 2014. Through it, pre-1940 homes for one or two families must divert 70-90% if undergoing demolition. The anticipated waste diverted from landfill is around 6,000 to 9,000 tonnes each year. The plan aims to encourage preservation and renewal of character homes, while increasing the reuse and recycling of materials that hold character value.

Across the region, clean wood (lumber and pallets that are unpainted, unstained, free of glue and untreated) makes up approximately 9% of all landfill waste. Metro Vancouver's Clean Wood



Waste Disposal Ban will be implemented at City transfer stations and landfill. The ban is expected to divert approximately 15,000 tonnes of wood regionally each year. This clean wood can be used as alternative fuel, composting, landscaping, or in select cases, reuse in construction.

## CHALLENGES

Driving compliance to the organics ban within the industrial, commercial and institutional sector is a key challenge. Many buildings were not built with the space to house multiple containers or to store an organics container. One perception leading to resistance in the community is that there is a high cost associated with starting an organics collection program. Also, frequent turnover of building users (staff or residents) can lead to contamination (items not properly separated into designated receptacles). Language has also been found to be a barrier. The City continues to work with businesses to help educate their tenants.

Last fall, the Province rejected Metro Vancouver's proposed By-Law 280.

This by-law would have required waste generated within the region to be disposed of in-region. The consequence of this decision is that there are no restrictions on where commercial waste originating from Metro Vancouver can go for disposal, making it harder to understand the quantities of municipal waste generated in the region. Waste management is handled by many different providers, making it difficult to obtain data on how close the City is getting to its zero waste goal and requiring that we derive progress data using a number of assumptions.

The City and Metro Vancouver have implemented a tipping fee structure to address waste going outside the region by providing an economic incentive for commercial waste haulers to utilize the regional disposal system, rather than haul to private disposal sites in Abbotsford and the US. Greater use of our regional facilities reduces the cost of operating those sites and results in a greater opportunity to improve overall waste diversion since waste disposed in-region is subject to disposal ban requirements.





## ACCESS TO NATURE

## **GOAL:** VANCOUVER RESIDENTS ENJOY INCOMPARABLE ACCESS TO GREEN SPACES, INCLUDING THE WORLD'S MOST SPECTACULAR URBAN FOREST

## TARGETS:

- All Vancouver residents live within a five-minute walk of a park, greenway, or other green space by 2020.
- Plant 150,000 new trees by 2020.



INDICATOR	BASELINE	2014	CHANGE
Per cent of city's land base within a 5-minute walk to a green space	92.6% (2010)	92.7%	+0.1%
Total number of additional trees planted	(2010)	37,000 trees	+37,000

The amount of natural habitat in Vancouver forms a total area 63% greater than Central Park in New York.

## 2014-2015 SUCCESSES:

#### **BUILT NEW PARKS**

The new Trillium Park in the False Creek Flats is now home to two new sports fields, a new playground and a multipurpose plaza and lawn area. The park is also home to an artist-led learning garden and a pollinator house frame. A second new park at 6th Avenue and Fir Street has created accessible green space on the Burrard Slopes. A new corner lot at Yukon Street and 17th Avenue in Mount Pleasant has been secured for park use, while the adjacent section of Yukon is being closed to vehicles, adding traffic calming to the Yukon Street bikeway and creating a more user-friendly edge to the park. Community engagement on park design is planned for 2015 with construction expected by the end of the year. And finally, in Point Grey more green space was added at Volunteer and Tatlow Parks as a result of the Seaside Greenway expansion.

#### IMPLEMENTED URBAN FOREST STRATEGY FRAMEWORK

In 2014, the City removed a by-law provision that allowed property owners to cut down one healthy tree per year. Canopy cover, the area of the city covered by trees as seen from the air, is commonly used by cities to measure health of the urban forest and the benefits it provides (such as air quality and rainwater absorption). Vancouver's canopy has been in decline over the last two decades and currently sits at 18%, largely due to the loss of large stature trees on private property. Passed in 2014, the Urban Forest Strategy Framework established the goal of growing our canopy back to 22% by 2055. Achieving this goal will involve not only the planting of new trees, but the retention of existing canopy, updated species selection, climate adaptation, and long-term planning and maintenance.

## RAISED AWARENESS AROUND CITY BIRDS

An excellent indicator of healthy ecosystems, birds provide a link between people and local biodiversity. The inaugural City Bird competition was held in 2014 to raise awareness about the importance of birds in Vancouver. In the end, the Black-capped Chickadee took home the gold for 2014, with over 700,000 votes cast during the voting process. Following the City Bird competition during Bird Week 2014, the Vancouver Bird Strategy was passed by City Council and the Park Board in January 2015. It outlines the work necessary to create conditions for native birds to thrive in Vancouver. With this strategy, Vancouver will be a world leader in supporting a rich and diverse group of native birds year-round, which has important economic, social and environmental benefits and helps the Greenest City goal of providing residents greater access to nature.



#### APPROVED REWILDING ACTION PLAN

In July 2014 the Park Board passed Rewilding Vancouver: An Environmental Education and Stewardship Action Plan. Over the next five years, the Park Board will work with partners to enhance the ability of residents to experience nature and increase understanding and awareness of nature in Vancouver. The plan was developed collaboratively by the Environmental Education and Stewardship Task Force and provides a cohesive set of 49 actions focused on environmental education and stewardship.

## CHALLENGES

The 5-minute walk target revealed disparities across the city, with some areas having considerable private green spaces while others having no public or private green spaces. This disparity has raised questions as to whether this target should be re-evaluated. The Park Board continues to look at green space needs and acquisition on a neighbourhood population basis, focusing on areas with lower park area per population ratios and areas planned for increased density. Within on-going redevelopment plans, new parks are being sought to provide open space for emerging high-density neighbourhoods in Downtown South. East Fraser Lands. Southeast and Northeast False Creek and along the Fraser River.

"By rewilding Vancouver, we will create a city that is not only more resilient, but also more exciting, more fascinating, more magical to live in – wilder in every sense of the word."

J.B. Mackinnon, Author



## LIGHTER FOOTPRINT

## GOAL: ACHIEVE A ONE-PLANET ECOLOGICAL FOOTPRINT

#### TARGETS:

(cumulative)

• Reduce Vancouver's ecological footprint by 33% over 2006 levels.



CityStudio

# INDICATORBASELINE2014CHANGEProxy: Number of people empowered\* by a<br/>City-led or City-supported project to take<br/>personal action in support of a Greenest City<br/>goal and/or to reduce levels of consumption600 people empowered to<br/>take action (2011)10,700 people empowered to<br/>take action+10,100

\* "People empowered to take action" are defined as those who are enabled to change their lifestyle or are implementing a community project that helps Vancouver achieve its Greenest City goals as a result of support provided by a City-led or City-supported program. Examples include learning to preserve food or ride a bike through a community centre class, as well as people involved in projects supported by the Vancouver Foundation and City of Vancouver Greenest City Fund. The definition excludes people participating in a dialogue or consultation, attending an event, using infrastructure (e.g., bike lanes, food scraps collection), or receiving a personal incentive (e.g., home energy retrofits). Via CityStudio, 60 City staff, 113 faculty, 96 community advisors and 3,000 students have contributed 75,000 hours towards Greenest City and other strategy initiatives since 2011.

## 2014-2015 SUCCESSES:

## SUPPORTED STUDENT AND RESIDENT-LED GREEN INITIATIVES

CityStudio students continue to show the best of innovation and creativity. Business students from SFU created new and innovative products from textile waste in the False Creek Flats to explore new business opportunities and promote zero waste. The popular Keys to the Streets (publicly accessible pianos in outdoor public spaces) returned in summer 2014, with thousands of participants. Over 300 community members enjoyed the Sunset Serenade on the seawall to end the summer.

The Greenest City Fund had a successful third year in 2014, with nearly \$540,000 distributed to 150 projects. A standout project was Project Green Bloc, in which residents of Vancouver's diverse Riley Park neighbourhood are working with Evergreen to lower their collective ecological footprint by 25% over three years through neighbourly collaboration. The project piloted a new street-party permit, took on bulk purchases for energy audits and bus passes, hosted a series of workshops on footprint reduction and participated in placemaking activities to strengthen their block. The effort will serve as a model for future projects.

Since launching five years ago, the Greenest City Scholars Program has connected 59 University of British Columbia graduate students with City staff to perform meaningful research on Greenest City initiatives. Examples of past projects include energy benchmarking for buildings, expanding the number of electric vehicles within the Vancouver Police Department fleet, and increasing social resilience for climate-related extreme events and emergency management.

In partnership with the Vancouver Foundation, the Greenest City Fund has awarded grants to 435 community initiatives over the past three years, totalling nearly \$1,500,000.



## SUPPORTED THE GROWING SHARING ECONOMY

Social lending, peer-to-peer accommodation, and car sharing are just some examples of how technology has pushed the sharing economy to a new level by making access to materials and resources easy. On the economic side, the sharing economy has leveraged unused assets and created new revenue streams. The sharing economy has other promising benefits: creating social connections and reducing isolation, ensuring that neighbours know each other well enough to help during an emergency, as well as reducing waste and reducing consumption through sharing assets.

In 2014, two CityStudio projects focused on expanding the sharing economy in Vancouver while helping to achieve City priorities. The Shareable City project put Vancouver on the map with the Shareable Cities Network by mapping shareable assets in Vancouver, and the Shareable Neighbourhood Project promoted connection and collaborative consumption at the neighbourhood level with the design and build of a recreational sharing library at Ladybug Community Garden.

## **CHALLENGES**

Influencing change to habits and behaviour to reduce ecological footprint is difficult, but the City remains dedicated to supporting residents and organizations in making small lifestyle changes with big impacts. For instance, the City has little influence over food consumption behaviours. These behaviours make up half of residents' ecological footprint. The production of meat and dairy consumes significant resources, from raising the animal to transporting products to market. Partners will be needed to help make the case for "meatless Mondays" and vegetarian meal options. At the same time, the Greenest City Fund, which has empowered residents to take on reducing our collective ecological footprint since 2012, is coming to its final year of committed funding. The City will work to identify a strategy for this program moving forward.





## CLEAN WATER

## **GOAL:** VANCOUVER WILL HAVE THE BEST DRINKING WATER OF ANY CITY IN THE WORLD

## TARGETS:

- Meet or beat the strongest of British Columbian, Canadian, and appropriate international drinking water quality standards and guidelines.
- Reduce per capita water consumption by 33% from 2006 levels.



INDICATOR	BASELINE	2014	CHANGE
Total number of instances of not meeting drinking water quality standards	0 instances (2006)	0 instances	0
Total water consumption per capita	583 L/person/day (2006)	490 L/person/day	-16%

Small upgrades can add up to huge savings: 100,000,000 litres of water will be saved annually by the restaurants that participated in a water-efficiency program in 2014.

## 2014-2015 SUCCESSES:

## INSTALLED EFFICIENT FIXTURES IN RESTAURANTS

In fall 2015 the City partnered with FortisBC and BC Hydro to install new water and energy efficient dish cleaning pre-rinse spray valves and faucet aerators in restaurants. These fixtures use up to 80% less water, helping restaurants cut their hot water use and energy bills. In total, 509 spray valves and 1,591 aerators were installed in 476 participating restaurants. The estimated annual water savings—more than 100,000 m<sup>3</sup>—would be enough to fill 40 Olympic-sized swimming pools.

## PROMOTED "WATER-WISE" GARDENING PRACTICES

The Garden Parties program was a three year program (2012-2014) that connected residents with a trained and professional garden consultant who came to their home to deliver a hands-on workshop. In total, 130 homes were visited and 650 residents received information on how to achieve a beautiful garden while using water efficiently. Garden hosts invited friends and neighbours to share the experience, building community as well as teaching skills in water efficient landscape management.

## UPGRADED SEWERS TO PREVENT CONTAMINATION

The City replaces about 10 km of combined sewer pipe each year with a storm sewer and a sanitary sewer system. Old systems are combined so that in drier weather. stormwater and waste water are carried to the sewage treatment plant together. But in heavy rains, high volumes of stormwater can exceed the capacity of a combined sewer system. The excess would then overflow and empty directly into our waterways. The City intends to eliminate this sewage overflow by 2050. Separated sewer systems help improve water quality, support wildlife, increase biodiversity and reduce sewage backups during storms.

In 2014, the focus was on repairing cross connections that resulted in waste water from homes being fed accidentally into stormwater channels. One example is the newly naturalized Still Creek.

Recent water testing revealed that some residential pipes had been connected to the stormwater main in error. Technicians used a special, non-toxic dye to identify properties with cross connections, then helped homeowners make necessary changes by providing information, guidance and a small grant.



## **CHALLENGES**

Water consumption in the institutional. commercial and industrial (ICI) sectors has increased since 2012. Together, these sectors consume 30% of the city's water. Major contributors include increased tourism, continued campus expansion at Vancouver-based postsecondary schools and universities, and increased production in the food processing and fabrication/ manufacturing industries. In response, the City assembled a new advisory group with strong ICI representation to provide insight on how to use water more efficiently as they grow economically.

On the residential side, multi-unit residential buildings are metered by building, but not by unit. It is up to the building owner to do this if they wish. Multi-family residential use accounts for about 26% of the city's total water use. The City is currently working with this group through the Green Landlords program, but will need to investigate other options to help residential buildings understand their water consumption.

The City will also scale-up leak detection and work to improve response time in dealing with leaks and breaks throughout Vancouver's network of service pipes.

The City is working with experts from the field to strengthen conservation efforts amongst institutions, businesses and industry, which collectively use 30% of the water in Vancouver.





## **GOAL:** BREATHE THE CLEANEST AIR OF ANY MAJOR CITY IN THE WORLD

## TARGETS:

 Meet or beat the most stringent air quality guidelines from Metro Vancouver, British Columbia, Canada, and the World Health Organization.



INDICATOR	BASELINE	2014	CHANGE
Total # of instances of not meeting air quality standards for ozone, particulate matter (PM 2.5), nitrogen dioxide and sulfur dioxide from both the Kits and Downtown stations combined*	27 instances (2008)	0 instances†	-100%
* Air quality metrics are measured by Metro Vanco at Robson Square. Four indicators of air quality a matter (PM 2.5) concentration >25 yg/m <sup>3</sup> , one ho sulfur dioxide (SO <sub>2</sub> ) concentration >20 yg/m <sup>3</sup> , and	uver from data from two monitor re used for comparison to world s our average nitrogen dioxide (NO d eight hour ground-level ozone (	ing stations in Vancouver: one in l standards. They are: 24 hour avera s) concentration >200 ųg/m³, 24 l O <sub>3</sub> ) concentration >52 ppb.	Kitsilano and one age particulate nour average

<sup>+</sup> The BC Provincial government plans to set more stringent SO<sub>2</sub> and NO<sub>2</sub> objectives in the future, and Metro Vancouver will review its SO<sub>2</sub> objectives in 2015. New exceedances could occur next year, and air quality improvement remains a priority.

Vancouver has over 200 public electric vehicle charging stations located throughout the city, including a fast-charging station at Hastings Park that can charge a vehicle in less than 30 minutes.

## 2014-2015 SUCCESSES:

## COMPLETED INSTALLATION OF ELECTRIC VEHICLE CHARGING INFRASTRUCTURE

The City completed a multi-year electric vehicle (EV) installation program, installing 111 stations throughout Vancouver since May 2011. Of these, 76 are available for public use, with another 14 located in multi-unit buildings for resident use. This helps address public concerns about the lack of infrastructure for charging "on the go."

The City analyzed its electric charging stations for the period of May 2011 to June 2014. During that time, there were 12,668 charging sessions, consuming 87,151 kWh of electricity. Approximately 80 tonnes of greenhouse gases were saved between May 2011 and August 2014, which equals about 34,000 litres of fuel that would otherwise have been burnt.

In 2015, the City also updated its building by-law so that 10% of stalls in mixed-use and commercial buildings must be ready for electric vehicles. Combined with privately installed charging stations, Vancouver now has over 200 electric vehicle charging stations.

## INSTALLED FAST CHARGER AT HASTINGS PARK

In early 2015, the City installed its first rapid charge electric vehicle station. Located in Hastings Park, the rapid charge station can fully charge a vehicle in less than 30 minutes—15 times faster than regular chargers. It is one of 30 fast chargers being installed in BC, and will be part of an EV charging station chain running from California to Whistler and across the main population centres of BC.

## IMPROVED FUTURE AIR QUALITY THROUGH REGULATION

In 2015, the International Maritime Organization's new regulations on fuel contaminants and air pollution in the shipping industry came into effect. Adopted via the federal government, this will reduce sulphur content in marine fuel from 1% to 0.1%, having an instant benefit to local air quality. The 10-fold reduction in sulphur content within coastal North America's Emission Control Area will have a direct and instant effect on reducing sulphur dioxide in the harbour. Enforcement is in the hands of Transport Canada. Success to-date is unknown, though some noncompliance has been found in US ports.



## **CHALLENGES**

The region continues to wait for a decision on the expansion of the Trans Mountain pipeline, which would increase oil tanker traffic seven-fold and undermine the gains we have seen in air quality.

The recent dip in oil prices may make the case for switching to an electric vehicle more challenging for some. However, the Province has recently renewed its incentive program, offering up to \$5,000 in savings to anyone buying an electric vehicle, which can be combined with the provincial Scrap-It program for savings of up to an additional \$3,250 with the trade-in of a qualifying vehicle. A similar incentive would be useful for the implementation of residential charging stations to ensure that the increase in electric vehicles is served.

Some myths about electric vehicles continue to persist: their range is too short, there is a lack of infrastructure, they take too long to charge and they are more expensive to own than conventional vehicles. EMOTIVE, a collaboration between the provincial government, BC Hydro, Fraser Basin Council, academic institutions, regional governments and over 100 communities/businesses, including the City of Vancouver, helps to dispel these myths and provides information on what it's like to own an electric vehicle.

Electric vehicles were charged nearly 20,000 times at the City's public electric vehicle charging stations in 2014.



-chargepoint



-chargepoin+





## LOCAL FOOD

## **GOAL:** VANCOUVER WILL BECOME A GLOBAL LEADER IN URBAN FOOD SYSTEMS

## TARGETS:

• Increase city-wide and neighbourhood food assets by a minimum of 50% over 2010 levels.



INDICATOR	BASELINE	2014	CHANGE
Total number of neighbourhood food assets*	3,340 food assets (2010)	4,556 food assets	+36%
in Vancouver			

Vancouver has 4,398 community garden plots, with 232 new plots added in 2014.

## 2014-2015 SUCCESSES:

### BUILT NEW GARDENS AT CITY PARKS

A number of beautiful new food gardens were completed in 2014. Beaconsfield Park, with the Italian Cultural Centre, will have an orchard, honeybees, pollinator spaces, and spaces for shared gardening and allotments. A garden just east of the Creekside Community Centre was built in collaboration with CityStudio. Riverfront and Kingcrest Parks, as well as the new park at West 6th Avenue and Fir Street also have new gardens and community garden plots. Kitsilano Community Centre built a new collaborative garden in partnership with Can You Dig It.

## PROVIDED FREE FRUIT TREES TO COMMUNITY GARDENS AND RESIDENTS

For the last three years the Park Board offered free fruit trees to community gardens on Parks, City and School Board land, and community gardens on private property. Over that time, 375 fruit trees were provided to gardeners. Meanwhile, in 2014, the TreeKeepers program distributed 2,300 fruit trees, growing the city's overall urban orchard one household at a time.

## SUPPORTED CULTURAL OUTREACH AROUND LOCAL FOOD

The Choi Project, a Greenest City Fundsupported program, was developed to highlight the wealth of healthy, locallygrown produce available at Chinese grocery stores. The project is run by the Hua Foundation, a youth-driven nonprofit based in Vancouver that works to engage the Chinese community around social and environmental change. Free multilingual guides and signage in stores show which Chinese vegetables are grown locally and in season. Cooking with G-Ma workshops highlight the culinary knowledge of "grandma's generation", teaching participants how to prepare traditional Chinese dishes.

## FOOD POLICY VIDEO GOES VIRAL

A video celebrating the successes of the Vancouver Food Strategy went viral in early 2015. At over half a million views and counting, the clip brought increased media attention to the City's urban agriculture initiatives and helped spread the message about the role food systems can play in making our city more vibrant, healthy and sustainable to new audiences locally and internationally. The City's Food Strategy, now two years old, sets out a plan to create a sustainable, affordable and healthy local food system for Vancouver.



### FOSTERED NEIGHBOURHOOD FOOD NETWORKS

In 2014, 21,750 people were involved in 12 neighbourhood food networks throughout Vancouver. These community-led coalitions of citizens, organizations and agencies work together to ensure that everyone has access to healthy, nutritious and affordable food. They do this through education and engagement, events, community food markets, gardening programs and community kitchens. Neighbourhood food networks are crucial in coordinating and delivering physical food assets, like gardens and markets.

## CHALLENGES

Currently located in Strathcona, the Greater Vancouver Food Bank Society is looking for new premises to better serve their members and bring a fresh new approach to the role the Food Bank can play in Vancouver. City Council passed a motion in 2014 instructing staff to support the Food Bank in finding a new home that also helps achieve the Food Bank and the City's shared food policy goals.

Urban farming is key to achieving a number of Greenest City goals, as well as Healthy City and Food Strategy objectives. However, there are no policies or regulations to govern this emerging activity. With roughly 18 urban farm businesses already in Vancouver, City staff are creating policy and guidelines to allow a consistent approach to regulation and guidance on best practices.

As many as 200 community garden plots were affected by Canadian Pacific Rail's removal of gardens along the Arbutus Corridor. Staff continue to examine options for relocation where possible, but this highlights the importance for urban agriculture to be designed to allow gardens to be established and then moved if necessary, recognizing the need to adapt as the city shifts its urban form and land use.



# GREENING CITY OPERATIONS

## 2014-2015 SUCCESSES:

## INSTALLED WINDBREAKS FOR WARMER PUBLIC POOLS

Swimming pools, especially outdoor ones, require a significant amount of energy to heat the water to comfortable temperatures. To improve energy efficiency and reduce greenhouse gas emissions, windbreaks were installed in 2014 over the summer at Kitsilano Pool and Second Beach Pool in Stanley Park, through the City's Capital Budget. This helped save approximately 170 metric tonnes of greenhouse gases: the equivalent of removing 36 cars from city streets. The initiative also saved approximately \$33,000 in natural gas consumption—a savings of about 25% over the previous year-while keeping sunbathers on the pool deck warmer.

Overall, greenhouse gas emissions from all City of Vancouver-owned buildings have dropped by 16% between 2007 and 2014—despite an increase in building floor area of 20%—due to building energy retrofit and optimisation projects, switching to lower carbon fuel sources, and lower emissions from electricity generation.

## IMPROVED RECYCLING THROUGH CIVIC ZERO WASTE PROGRAM

The City continues to improve the corporate waste diversion program that began three years ago. In 2014, the City achieved an 83% waste diversion rate in City buildings (such as City Hall and the Crossroads building at 507 West Broadway), up from 70% in 2013. City staff have set a target of 90% by 2020.

Overall, greenhouse gas emissions from all City of Vancouver-owned buildings have dropped by 16% between 2007 and 2014—despite an increase in building floor area of 20%.

#### **CITY OPERATIONS GO GREEN**

The Green Operations Plan is a collection of the City's strategies to lead the way on green initiatives. It's about how we do the work we do in a more sustainable way. The long-term vision is for the City to become a world leader in environmentally responsible operations. Over the next few years Green Operations will also focus on reducing waste generation, continuing to improve the capture of landfill gas, reducing the use of toxins, and reducing water consumption in City operations.

#### **RIGHT-SIZING POLICE VEHICLES**

Over the past year, the Fleet Management team continued rightsizing City of Vancouver vehicles (deploying the appropriate size of vehicle that a role requires). The team also implemented anti-idling technology and worked with departments to improve vehicle efficiency. Departments continue to optimize the routes they take in their daily operations. One of the many initiatives in fleet improvement included the introduction of 66 new Dodge Chargers for the Vancouver Police Department, with the entire patrol fleet to be replaced by 2017. These vehicles have smaller V6 engines than previous models, as well as idle-stop technology. In 2014, emissions from police patrol vehicles were 6.4% less than in 2013.

## BANNED NEONIC PESTICIDES IN CITY PARKS

In October 2014, the Vancouver Park Board unanimously passed a motion to ban neonic pesticides in Vancouver parks, making Vancouver the first local government in Canada to do so. There is an established link between neonic pesticide use and declining bird populations in agricultural landscapes. In Vancouver, neonic pesticides have been used to control chafer beetle populations, which are dug out of lawns causing cosmetic problems. Pesticides themselves have low toxicity to birds and other vertebrates, but can kill the food source that sustains life for birds.

#### **ONGOING CARBON NEUTRALITY**

The City has been carbon neutral since 2013.

Vancouver maintains one of the greenest civic fleets in North America, with 46 hybrids, 29 electric vehicles, and 107 vehicles with engine idle-stop technology.

# GET INVOLVED!

Over 100 Greenest City-related projects were completed between 2011 and 2014, and the City of Vancouver thanks everyone who continues to make our city a world leader in sustainable living.

As we celebrate our collective successes, we are looking ahead to how the City can drive change and support community efforts, both in the years leading up to 2020, and beyond. Innovation and a deep love for the place we live will be our strongest tools for change. As the Earth Hour National Capital for 2015, there's never been a better time to take part in projects underway throughout the city, or to start your own!

If you have an idea that will help make this city greener, more vibrant, and even more amazing, consider applying for a Greenest City Grant.

Visit the Vancouver Foundation website at vancouverfoundation.ca/initiatives/greenest-city-fund for more details.

**Subscribe to the Greenest City Newsletter at: vancouver.ca/greenestcity** Facebook: Vancouver's Greenest City Initiative Twitter: @GreenestCity

"The Greenest City 2020 Action Plan has a role for everyone in Vancouver. Whether you're involved in the local business community, active in your neighbourhood, or interested in greening your own home, your efforts are essential

to our shared success."

From Greenest City 2020 Action Plan

eelil



## ACKNOWLEDGEMENTS

Thank you to all staff and members of the community for your hard work and for allowing us to share the stories of your success.



#### For More Information:

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