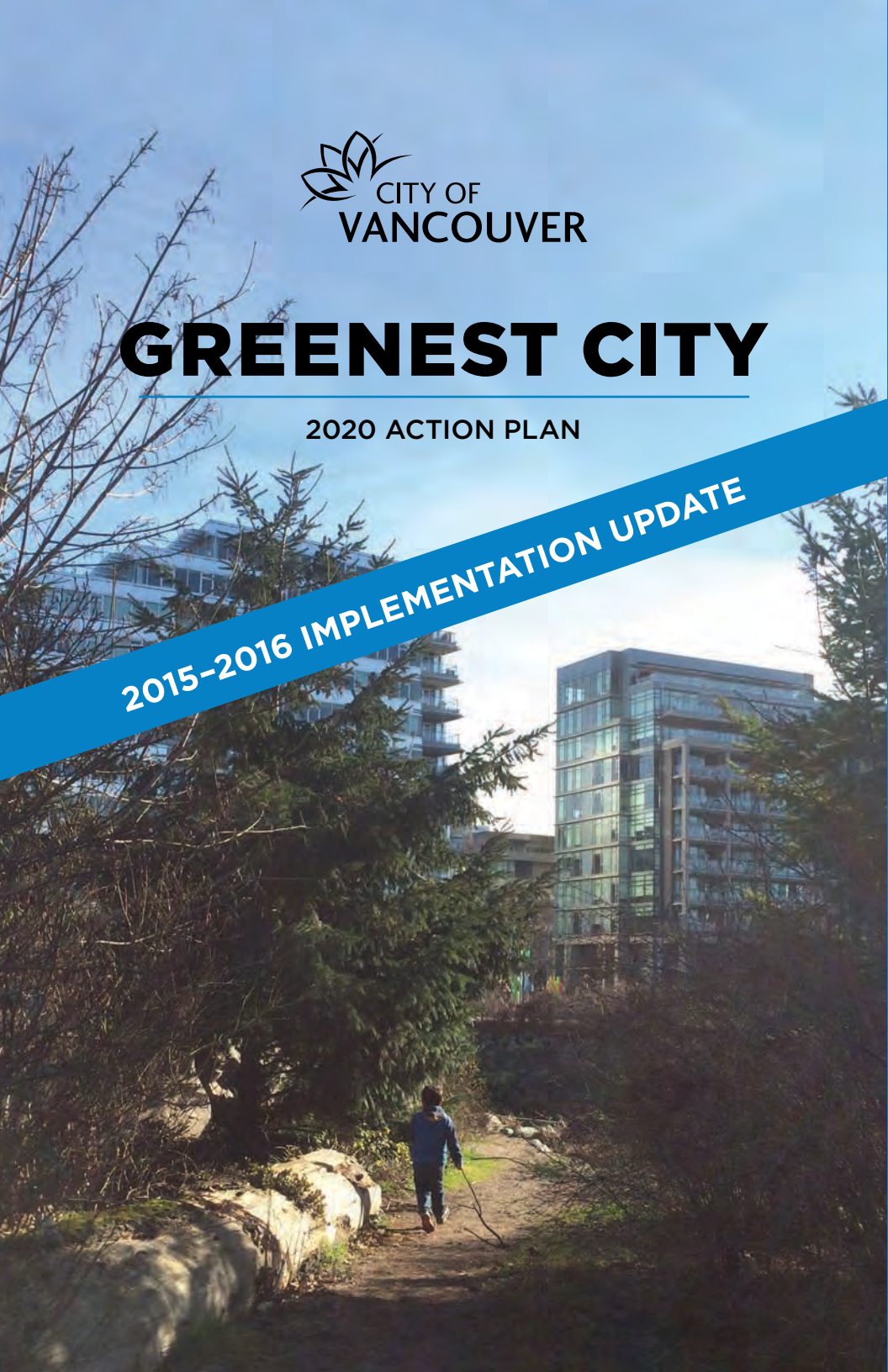
CITY OF VANCOUVER

GREENEST CITY

2020 ACTION PLAN

2015–2016 IMPLEMENTATION UPDATE



PROGRESS HIGHLIGHTS

27%

DECREASE
-IN-
VEHICLE KM DRIVEN PER PERSON
SINCE 2007

BIODIVERSITY STRATEGY APPROVED

50%

-TRIPS MADE BY-
WALKING, CYCLING, OR TRANSIT

48,900
NEW TREES PLANTED
SINCE 2010

23%

DECREASE IN **SOLID WASTE**
SENT TO LANDFILL AND INCINERATOR SINCE 2008

20%

DECREASE IN
GREENHOUSE GASES FROM BUILDINGS
JUNE 2007

38%

INCREASE IN
NEIGHBOURHOOD FOOD ASSETS
SINCE 2010

15%

DECREASE
-IN-
COMMUNITY GREENHOUSE GASES
SINCE 2007

10% OF **COMMUTING TRIPS MADE** BY **CYCLING**

DASH-BOARD

GOAL AND TARGETS	INDICATOR	BASELINE	2015	CHANGE FROM BASELINE	IMPROVED OVER BASELINE	2020 TARGET
CLIMATE AND RENEWABLES						
Target 1: Reduce community-based greenhouse gas emissions by 33% from 2007 levels.	Total tonnes of community CO_2e emissions from Vancouver	2,850,000 tCO_2e (2007) [1]	2,410,000 tCO_2e	-15%	Yes	1,910,000 tCO_2e
GREEN BUILDINGS						
Target 1: Require all buildings constructed from 2020 onward to be carbon neutral in operations.	Kilograms of CO_2e per square metre of newly built floor area	20.7 $kgCO_2e/m^2$ (2007)	14.4 $kgCO_2e/m^2$ (2014)	-30%	Yes	carbon neutral
Target 2: Reduce energy use and GHG emissions in existing buildings by 20% from 2007 levels.	Total tonnes of CO_2e from all community buildings	1,625,000 tCO_2e (2007)[2]	1,295,000 tCO_2e	-20%	Yes	1,300,000 tCO_2e
GREEN TRANSPORTATION						
Target 1: Make the majority of trips (over 50%) by foot, bicycle and public transit.	Per cent mode share by walk, bike and transit	40%[3]	50% of trips	+10%[3]	Yes	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 (2007)	4,319 km	-27%	Yes	4,760 km
ZERO WASTE						
Target 1: Reduce total solid waste going to the landfill or incinerator by 50% from 2008 levels.	Annual solid waste disposed to landfill and incinerator from Vancouver	480,000 tonnes (2008)	370,000 tonnes (2014)[4]	-23%	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.	Per cent of city's land base within a five-min walk to a green space	92.6% (2010)	92.7%	+0.1%	Yes	95%[5]
Target 2: Plant 150,000 additional trees.	Total number of additional trees planted	- - (2010)	48,900 trees	+48,900	Yes	150,000 trees
<NEW> Target 3: Restore or enhance 25 hectares of natural areas between 2010 and 2020.	Total hectares of natural areas restored or enhanced	- - (2010)	14 hectares	+14	Yes	25 hectares
<NEW> Target 4: Increase canopy cover to 22% by 2050.	Per cent of city's land area covered by tree-leaf canopies	18% (2013)	Survey to be conducted in 2017	- -	- -	22% (2050)
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 (2006)	0 instances	0	Yes	0 instances
Target 2: Reduce per-capita water consumption by 33% from 2006 levels.	Total water consumption per capita	583 L/person/ day (2006)	493 L/person/ day	-15%	Yes	390 L/person/ day
LOCAL FOOD						
Target: Increase city-wide and neighbourhood food assets by a minimum of 50% over 2010 levels.	Total number of neighbourhood food assets[6] in Vancouver	3,344 food assets (2010)	4,612 food assets	+38%	Yes	5,158 food assets
CLEAN AIR						
Target: Meet or beat the most stringent air quality guidelines from Metro Vancouver, BC, Canada, and the World Health Organization.	Total number of instances of not meeting of air quality standards for ozone, particulate matter (PM 2.5), nitrogen dioxide and sulphur dioxide from both the Kitsilano and Downtown stations combined[7]	27 instances (2008)	3 instances	-89%	Yes	0 instances
GREEN ECONOMY						
Target 1: Double the number of green jobs over 2010 levels.	Total number of green jobs	16,700 jobs (2010)	19,900 jobs (2013)[8]	19%	Yes	33,400 jobs
Target 2: Double the number of companies that are actively engaged in greening their operations over 2011 levels.	Per cent of businesses engaged in greening their operations	5% of businesses engaged (2011)	Survey to be conducted in 2016[8]	- -	- -	10% of businesess engaged
LIGHTER FOOTPRINT						
Target: Reduce Vancouver's ecological footprint by 33% over 2006 levels.	Proxy: Number of people empowered[9] 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)	13,400 people	+12,800	Yes	To be determined

[1] *Emissions for baseline and subsequent years have been revised due to updated methods for calculating emissions from buildings (see Green Buildings section) and the Vancouver Landfill (see Climate Leadership section on landfill gas capture).*

[2] *Emissions for baseline and subsequent years have been revised due to a correction in FortisBC's data set around which buildings fall within city limits. Totals now also include industrial buildings. This metric previously included only residential and commercial buildings.*

[3] *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.*

[4] *Solid waste data is compiled 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.*

[5] *5% of the city's land-base is industrial land area, and is not considered part of the target.*

[6] *Food assets include: number of community garden plots, farmers markets, community orchards, community composting facilities, community kitchens, community produce stands, and urban farms.*

[7] *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 (PM2.5) concentration >25 µg/m³ , one-hour average nitrogen dioxide (NO_2) concentration >200 µg/m³, 24-hour average sulphur dioxide (SO_2) concentration >20 µg/m³,and eight hour ground-level ozone (O_3) concentration >52 ppb.*

[8] *New green jobs and greening business surveys will be conducted in 2016.*

[9] *"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).*

AWARDS

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

2015 Economist Intelligence Unit Global Livability Index: Third overall globally; first in North America

2015 Asia-Pacific Economic Cooperation, Building Better Cities Survey: Top Three Cities

2015 C40 Cities Awards: Carbon Measurement & Planning (for the Greenest City 2020 Action Plan)

CDP: One of 10 Top Cities for Climate Reporting and Disclosure in 2015

2015 Royal Architectural Institute of Canada, Metro Vancouver Chapter: Advocates of Architecture Award (CityStudio)

2016 Mercer Quality of Living Survey: Fifth overall globally; first in North America

2016 Federation of Canadian Municipalities Sustainable Communities Award: Transportation (Active Transportation Infrastructure)

2016 Mediacorp Canada Inc.: Canada's Greenest Employers

2016 Tripadvisor's Travelers' Choice Awards: Top Destination in Canada (specifically for our forests and "grand parks")

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.

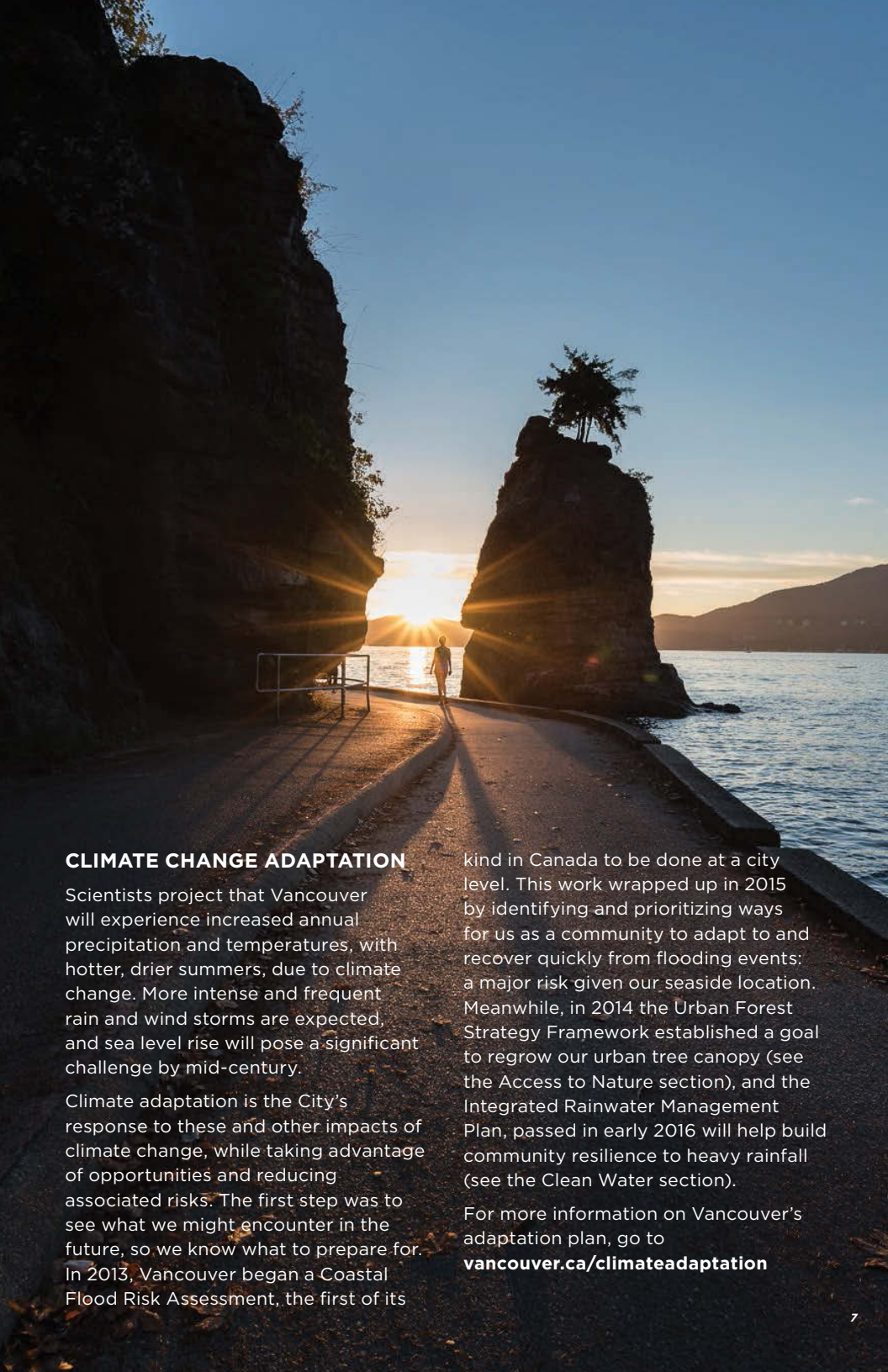
The *Greenest City 2020 Action Plan* (GCAP) aims to meet that goal by building a vibrant community, a thriving green economy, and a greener, healthier way of living, while preparing Vancouver for the potential impacts of climate change.

Last year, at the halfway mark and with 80% of its original high-priority actions completed, GCAP went through a refresh. Staff identified more than 50 new actions in collaboration with over 300 internal and external advisors. The public provided its input, during the Bright Green Summer Campaign in 2015 (see the Climate and Renewables section for the whole story).

The result is a bigger and better GCAP, and a new road map to becoming the greenest city in the world by 2020. In the meantime, this update recaps some of the work done in the past year by City staff and residents to get us closer to our goals.

"The future of Vancouver's economy and liveability will depend on our ability to confront and adapt to climate change."

From Greenest City 2020 Action Plan Part Two: 2015-2020



CLIMATE CHANGE ADAPTATION

Scientists project that Vancouver will experience increased annual precipitation and temperatures, with hotter, drier summers, due to climate change. More intense and frequent rain and wind storms are expected, and sea level rise will pose a significant challenge by mid-century.

Climate adaptation is the City's response to these and other impacts of climate change, while taking advantage of opportunities and reducing associated risks. The first step was to see what we might encounter in the future, so we know what to prepare for. In 2013, Vancouver began a Coastal Flood Risk Assessment, the first of its kind in Canada to be done at a city level. This work wrapped up in 2015 by identifying and prioritizing ways for us as a community to adapt to and recover quickly from flooding events: a major risk given our seaside location. Meanwhile, in 2014 the Urban Forest Strategy Framework established a goal to regrow our urban tree canopy (see the Access to Nature section), and the Integrated Rainwater Management Plan, passed in early 2016 will help build community resilience to heavy rainfall (see the Clean Water section).

For more information on Vancouver's adaptation plan, go to **vancouver.ca/climateadaptation**

1 CLIMATE AND RENEWABLES

GOAL: ELIMINATE DEPENDENCE ON FOSSIL FUELS

TARGET:

- Reduce community-based greenhouse gas emissions by 33% from 2007 levels.

15% **DECREASE** IN **COMMUNITY GREENHOUSE GASES** SINCE 2007

INDICATOR	BASELINE	2015	CHANGE
Total tonnes of community CO_2e emissions from Vancouver	2,850,000 tCO_2e (2007)*	2,410,000 tCO_2e	-15%

** Emissions for baseline and subsequent years have been revised due to updated methods for calculating emissions from buildings (see Green Buildings section) and the Vancouver Landfill (see Climate and Renewables section on landfill gas capture).*

Vancouver already has the lowest greenhouse gas emissions per capita of any major city in North America, and is projected to have the fastest growing economy in Canada over the next three years.

2015-2016 SUCCESSES:

COMMITTED TO 100% RENEWABLE ENERGY BY 2050

In November 2015, Vancouver City Council unanimously approved the Renewable City Strategy, committing Vancouver to derive 100% of its energy from renewable sources before 2050. The strategy is based on three key principles: reduce energy use, increase the use of renewable energy, and increase the supply of renewable energy. Meanwhile, City operations can be a catalyst for change through its own internal operations, by adopting zero emission standards for new City buildings, and transitioning the City's vehicle fleet to renewable sources of energy.

Vancouver has what it takes to successfully get all of its energy from renewable sources before 2050. At 3.9 tonnes of CO_2e per person, we already have the lowest per capita greenhouse gas emissions of any major North American city. We are economically strong, diverse, and innovative, and we already have an abundance of clean electricity. Fossil fuels can no longer be relied upon to provide the benefits they have in the past. We can play catch up later or, by acting now, enhance quality of life for residents, improve equity and grow our economy even more.

LED THE CHARGE FOR CITIES AT CLIMATE TALKS IN PARIS

In late 2015, the world met in Paris for COP21 (the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change), which resulted in the Paris Agreement: a landmark commitment to combat climate change. Cities were recognized for the first time as being critical to our collective success. Considered the engines of the world economy, cities also account for 70% of total global emissions.

With every level of community and national leadership in attendance, Vancouver's climate and green economy leadership was highlighted on the world stage. Led by Mayor Gregor Robertson and represented by staff from the City and the Vancouver Economic Commission, the Vancouver delegation attended dozens of events and were invited to hundreds more. Simon Fraser University/Renewable Cities, UBC AMS, as well as local and national non-governmental organizations, also attended.

Vancouver won a prestigious C40 Cities Award, recognizing the Greenest City Action Plan as a global example of the role greenhouse gas management can play in driving climate action.

LIMES LEMONS

This award places Vancouver in the company of past winners London and Copenhagen. Vancouver was also widely recognized for the Renewable City Strategy, an example of a city accelerating and intensifying the actions and investments needed for a sustainable low-carbon future.

CONTINUED TO REFINE LANDFILL GAS CAPTURE

Methane, emitted when landfill waste decomposes, contributes to climate change. Twenty-five times more damaging than CO_2, methane must be properly managed. Every year the City makes upgrades at the Vancouver Landfill to capture more of this gas for heating and power generation. New opportunities for beneficial use of landfill gas are also under review. In 2015, 71% of the gas emitted by the Landfill was captured. This is based on recent capture-system upgrades and a more precise methodology for determining how much methane the Landfill emits. The new methodology is more appropriate for the Vancouver Landfill compared to the previous methodology, which used the same criteria across the province and did not account for specific conditions at individual landfills.

CHALLENGES

Previously there had been little to no action on climate change at the federal level in Canada, leaving provinces and cities to take on the task alone. As Vancouver continues to advocate with all levels of government for strong climate action, the new federal government has signalled that climate mitigation and adaptation are priorities and are exploring progressive, science-based policies. The 2016 Federal Budget provides significant funding for public transit and accelerated design and implementation for projects such as the Broadway Corridor SkyTrain extension, plus an additional $518M for climate change mitigation and adaptation infrastructure projects.

ARNAUD BOUISSOU

2 GREEN BUILDINGS

GOAL: LEAD THE WORLD IN GREEN BUILDING DESIGN AND CONSTRUCTION

TARGETS:

- Require all buildings constructed from 2020 onward to be carbon neutral in operations.
- Reduce energy use and greenhouse gas emissions in existing buildings by 20% from 2007 levels.

DECREASE IN **GREENHOUSE GASES** FROM **BUILDINGS** SINCE 2007

INDICATOR	BASELINE	2015	CHANGE
Kilograms of CO_2e per square metre of newly built floor area	20.7 tCO_2e/m^2 (2007)	14.4 tCO_2e/m^2 (2014)	-30%
Total tonnes of CO_2e from all buildings	1,625,000 tCO_2e (2007)*	1,295,000 tCO_2e	-20%

* *Emissions for baseline and subsequent years have been revised due to a correction in FortisBC's data set around which buildings fall within city limits. Totals now also include industrial buildings. This metric previously included only residential and commercial buildings.*

Buildings constructed to 2015 requirements emit 30% fewer greenhouse gases per square metre than those built to the 2007 requirements.

2015-2016 SUCCESSES:

APPROVED THE BUILDING RETROFIT INNOVATION FUND

Passed by Council in February 2016, the Building Energy Retrofit Fund will support and expand programs that result in energy efficiency upgrades for buildings throughout the city. The Fund will support existing programs and new approaches to engage, support, and provide incentives for building owners to invest in energy efficiency improvements in existing buildings.

The fund supports the Building Energy Retrofit Strategy (adopted by Council in June 2014), which targets the buildings that have the most potential to reduce energy use and emissions. Implementation of the initial programs that the fund aims to support will result in an estimated 3,000 tCO_2e reduction annually. The $1 million fund is also anticipated to leverage an estimated $8 million in partner funding from provincial programs, utility incentives, and private investments in energy efficiency in Vancouver.

ENABLED PASSIVE HOUSE DEVELOPMENTS

Cutting heating in a home can involve installing smart thermostats or more efficient boilers. But what if there was an opportunity to do away with heating altogether? Passive design is based on the simple principle that a thoughtfully designed, better-insulated building can reduce or even eliminate the necessity and costs associated with heating and cooling, while staying comfortable for occupants year-round.

Passive House is a well-established ultra-low energy building performance standard. There are over 40,000 Passive House buildings in every climate around the world. In 2015, the City enabled the Certified Passive House standard in new homes in Vancouver by relaxing certain restrictions for homes that committed to the standard.

Casa Luca, the first Certified Passive House in Vancouver, was completed in early 2016 and demonstrated that by building with commonly used details, materials, and components, construction costs were nearly the same as standard techniques. Meanwhile, Passive House certified buildings can also have up to 90% lower emissions than typical buildings, translating to cost savings as well. In its first few months of occupancy by a family of four in the middle of winter, Casa Luca's heating bills were below $20 a month.

SUPPORTED MULTI-ETHNIC ENGAGEMENT AROUND ENERGY CONSERVATION

Vancouver has a diverse population, with new and long-term residents originating from all corners of the world. Engaging all Vancouverites inclusively around energy conservation requires an understanding of some of the potential barriers, which range from language and cultural differences to everyday living habits in a new climate.

In 2015, the City began supporting Empower Me, an award-winning energy-conservation program for new immigrants and ethnic communities in BC. Delivered by trusted community peers, in their own languages, and in the comfort of their homes, it encourages peer-learning and actions that save energy, reduce energy costs, and increase the overall comfort and safety of participants' homes. Since its inception in 2012, Empower Me has reached more than 1,300 homes, saved an average of $200 in annual utility bills per home, and removed over 7,500 tonnes of CO_2e from the atmosphere.

INTRODUCED METRIC FOR LOW CARBON NEW BUILDINGS

Setting the policies to achieve low-carbon new buildings means measuring where we are now and in the past. Data shows that between 2007 and 2014, the greenhouse gas emissions per square metre of newly built floor area decreased by 30% from 2007 levels, over the period the City's green building policies began to take effect.

CHALLENGES

While introducing world-leading green building policies is needed to keep us on track towards our GCAP goals, the City recognizes industry has to be able to keep up with the pace of change. Continued engagement with the development and construction industries will help create awareness, capacity, and supply chains so these policies can flourish.

Vancouver is one of the few cities in BC to have its own building bylaw; other municipalities follow the Provincial code, which is different. Having our own building code allows us to accelerate the shift to greater energy efficiency and greener buildings. Working with the provincial government to consolidate and standardize building code regionally and provincially would help reduce confusion, align industry priorities, and create a bigger market for green building technologies and techniques.

BARN OWL PHOTOS AND DLP ARCHITECTURE

3 GREEN TRANSPORTATION

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

TARGETS:

- Make the majority (over 50%) of trips by foot, bicycle and public transit.
- Reduce average distance driven per resident by 20% from 2007 levels.

DECREASE -IN- VEHICLE KM DRIVEN PER PERSON SINCE 2007

INDICATOR	BASELINE	2015	CHANGE
Per cent mode share by foot, bike and transit	40%*	50% of trips	+10%
Total vehicle km driven per person	5,950 km/person/year	4,319 km/person/year	-27%

** 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.*

10% of work commutes are made by bicycle which is as high or higher than any other North American city with a population over 500,000.

2015-2016 SUCCESSES:

INTRODUCED A BIKE-SHARE PROGRAM

Public bike share is coming to Vancouver. Announced in February 2016, Mobi will hit the streets in summer 2016. The launch will include 1,000 bicycles and 100 stations, with an additional 500 bikes and 50 stations by end of the summer. The initial service area includes the Downtown Peninsula, extending to Arbutus Street, 16th Avenue, and Main Street. Vancouver's Mobi bikes are "Smart Bikes" and can be activated and unlocked from a docking station through an interface on the bike or through a payment kiosk, making them an easy and convenient option for short trips. Specially designed helmets will be available on bikes at no additional cost.

CONTINUED BUILDING A SAFER AND MORE BIKE-FRIENDLY CITY

Projects of all sizes, from smaller "spot improvements" to large infrastructure projects, help make Vancouver's streets safer for everyone. For instance, a small design change in 2015 at the intersection of Dunsmuir and Hornby Streets led to an 80-90% drop in illegal left turns by cars and greatly improved safety for everyone. And once completed, the latest round of upgrades to the Burrard Bridge, which began in February 2016, will improve safety for all users at the Burrard-Pacific intersection at the north end. This is currently the second highest collision location in the city.

The City continued to invest in safe-cycling infrastructure with an increased focus on building protected bike lanes that feel comfortable for people of all ages and abilities, leading to record levels of cycling across the city. The number of daily trips by bike increased by a third in 2015. In the city, 7% of all trips are now made by bike. In some neighbourhoods, that figure is as high as 17%. More than a quarter of Vancouverites report riding at least twice a week in fair weather, and over half of residents indicate they would like to cycle more often.

SECURED THE FUTURE OF THE ARBUTUS GREENWAY

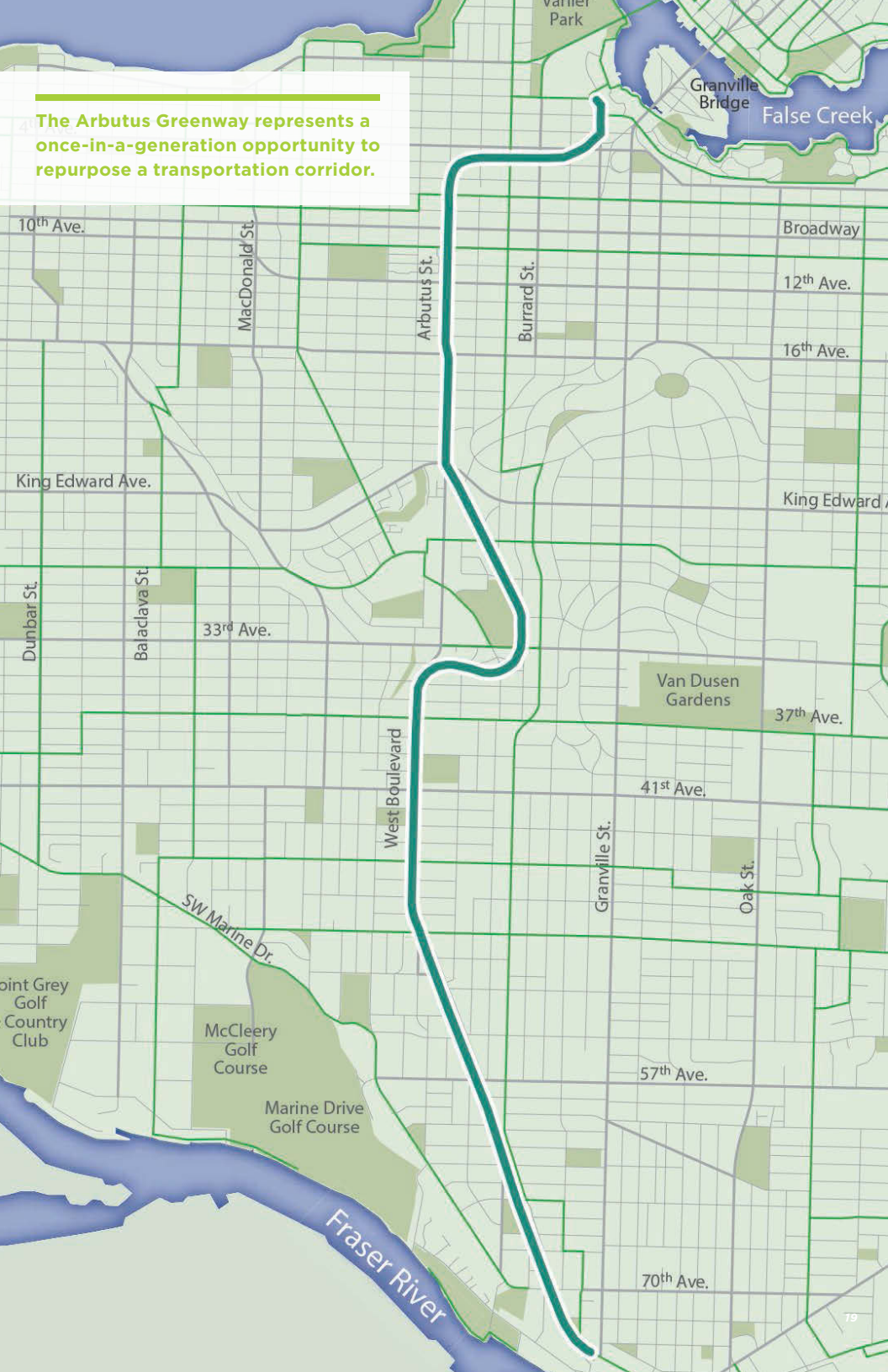
For several years, the City and CP Rail were in discussions regarding the 42 acres of land known as the Arbutus Corridor. In March 2016, the City announced the purchase of the Corridor from CP. The creation of a future Arbutus Greenway will feature separated spaces for walking, cycling and public realm features connecting neighbourhoods from False Creek all the way to Marpole. The Arbutus Greenway represents a once-in-a-generation opportunity to repurpose a transportation corridor, similar to New York's High Line and other international examples. The City is inviting residents to get involved and provide input as the design and planning process gets under way: sign up to receive more information at **arbutusgreenway@vancouver.ca**.

CHALLENGES

The "NO" result of 2015's Transportation and Transit Plebiscite had a significant impact on the future of transportation throughout the region. The Broadway Corridor is the busiest bus corridor in North America and remains a top transportation priority for Vancouver. An agreement in June 2016 between the federal and provincial governments and TransLink committed funding for the first three-year phase of Metro Vancouver's 10-year transit plan. This includes accelerated design and implementation for projects such as the Broadway Corridor SkyTrain extension. However, the question of funding for the second, seven-year phase remains. The City and TransLink are now working with senior government agencies to secure full project funding and to ensure we are ready to build once funding is confirmed.

Driverless vehicles are a rapidly emerging technology that some predict could be on the roads in the next five to 10 years, with as much as 75% of cars sold being driverless by 2040. This could have major implications on cities, impacting car ownership levels, how people choose to get around, transportation safety, and land use and community design. For Vancouver, this will also have direct implications for the plans laid out in the Transportation 2040, Greenest City, and Renewable City strategies. Staff is looking into potential impacts on the City's sustainability, transportation, land use, and economic plans, and how to maximize the benefits to come, while mitigating any negative aspects.

Cycling trips across the Burrard Bridge increased over 30% in the first year after the South intersection and Seaside Greenway upgrades were completed in 2014. Data shows that travel times for other road users were unaffected.


The Arbutus Greenway represents a once-in-a-generation opportunity to repurpose a transportation corridor.
Granville Bridge
False Creek
10th Ave.
MacDonald St.
Arbutus St.
Burrard St.
Broadway
12th Ave.
16th Ave.
King Edward Ave.
King Edward
Dunbar St.
Balaclava St.
33rd Ave.
Van Dusen Gardens
37th Ave.
West Boulevard
41st Ave.
Granville St.
Oak St.
SW Marine Dr.
Golf Country Club
McCleery Golf Course
Marine Drive Golf Course
57th Ave.
Fraser River
70th Ave.

4 ZERO WASTE

GOAL: CREATE ZERO WASTE

TARGET:

- Reduce solid waste going to landfill and incinerator by 50% from 2008 levels.

DECREASE IN **SOLID WASTE SENT TO LANDFILL AND INCINERATOR** SINCE 2008

INDICATOR	BASELINE	2014*	CHANGE
Annual solid waste disposed to landfill and incinerator from Vancouver	480,000 tonnes (2008)	370,000 tonnes	-23%

** Solid waste data is compiled 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.*

Nearly 23,000 volunteers participated in the Keep Vancouver Spectacular litter cleanup movement in 2015.

2015-2016 SUCCESSES:

DIVERTED CONSTRUCTION WASTE FROM LANDFILL

Demolition of pre-1940 homes in Vancouver must comply with the new Green Demolition Bylaw, which stipulates that 75% of the demolition material must be reused or recycled (90% in the case of character homes). In December 2015, Council approved expanding the bylaw to include pre-1950 homes as of January 1, 2017, and all homes as of January 1, 2018. Council also approved amendments to the bylaw to provide greater incentives for contractors to salvage and reuse demolition material.

So far, more than 96% of single-family home demolitions have complied with the Green Demolition bylaw, with an average diversion rate of 86%, compared to a typical demolition which only diverts around 50%. The bylaw has resulted in nearly 10,000 tonnes of material being diverted from landfill in 2015 alone. Last year, roughly 3,000 tonnes of greenhouse gases were avoided by diverting wood waste from landfill. This plan is currently focused on smaller wood structures, because large concrete and steel buildings already have good recycling rates.

CONTINUED DIVERSION OF ORGANIC WASTE FROM LANDFILL

It has been three years since the City began collecting food scraps from residences as part of the Green Bin program. Since then, the amount of food and yard waste collected annually from single-family homes has increased by nearly 75% and garbage collected has decreased by 45%. Nearly 100% of all apartment and condo buildings with City waste collection now have access to the Green Bin program or alternative measures. Staff will continue to engage residents throughout the year to promote the Green Bin program and increase awareness of the organics disposal ban.

Green businesses are diverting organics as well. Seven out of 10 businesses that generate food waste in the city have set up an organics-recycling program. The City has been contacting and educating the remaining businesses about the disposal ban on food scraps, how businesses can comply with the ban and how they can reduce food waste.

20TH ANNIVERSARY OF KEEP VANCOUVER SPECTACULAR

The Keep Vancouver Spectacular (KVS) program was established by the City of Vancouver and Tourism Vancouver to empower residents who want to help keep Vancouver clean, green and spectacular. Over the years, more than 225,000 volunteers—including school groups, sports teams, businesses, neighbourhood associations and community policing centres—have taken to the streets to keep the city beautiful for those who visit and live here. In 2015, over 12,000 bags of litter were collected by volunteers; one volunteer alone collected 560 bags!

DIVERTED ELECTRONICS FROM THE LANDFILL WITH FREE DROP-OFF EVENTS

The City teamed up with volunteers from their Keep Vancouver Spectacular program, ElectroRecycle and Encorp to set up electronic recycling drop-off events throughout the year. These drop-off events provided a convenient and free option for Vancouverites to recycle their electronics, small appliances, power tools and household batteries. In 2015, over 11,000 electronics and small appliances were diverted from disposal and recycled through our drop-off events.

CHALLENGES

Changing habits and encouraging residents and businesses to divert their compostable organic waste from the garbage to their Green Bin continues to be a challenge. About 60% of privately serviced buildings are in compliance with the organics ban and have set up organics-recycling programs. A recent bylaw revision in 2016 allows the City to ticket violators, and staff will continue to assist, educate, and engage the remaining businesses on how they can comply with the ban and reduce food waste.

Now that we are at the half-way point to 2020, the City needs a long-term plan for achieving “zero waste” success. A Zero Waste plan is currently under development, and will outline how Vancouver as a community can achieve zero waste over the long term. The plan will address waste across the major supply chains—food, products, and building materials—as well as take a life-cycle approach: looking at how the community can generate less waste in the first place, as well as diverting it from landfill and incinerator.


Old Brick
75¢
Each

NICK PAGE

5 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.
- Plant 150,000 new trees.
- **<NEW>** Restore or enhance 25 hectares of natural areas between 2010 and 2020.
- **<NEW>** Increase canopy cover to 22% by 2050.

48,900
NEW TREES PLANTED
SINCE 2010

INDICATOR	BASELINE	2015	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)	48,900 trees	+48,900
<NEW> Total hectares of natural areas restored or enhanced	-- (2010)	14 hectares	+14
<NEW> Per cent of city's land area covered by tree leaf canopies	18% (2013)	Survey to be conducted in 2017	--

What's the best place to see spawning salmon in east Vancouver? Still Creek at Natal Street and Cornett Avenue in the middle of November.

2015-2016 SUCCESSES:

APPROVED BIODIVERSITY STRATEGY TO SUPPORT NATURE ACROSS THE CITY

The Park Board and City Council adopted a city-wide Biodiversity Strategy earlier this year. Together with the Urban Forest Strategy, the Rewilding Action Plan, and the Bird Strategy, the Biodiversity Strategy provides a foundation for protecting and restoring natural areas, species, and ecological processes, and for improving access to nature in all of Vancouver's neighbourhoods. It describes strategies to restore priority habitats such as forests, wetlands and shorelines as part of a city-wide ecological network, to change the Park Board's operations to better support biodiversity, and to celebrate biodiversity as an important part of city life.

Biodiversity in urban landscapes depends on maintaining an "ecological network" of natural areas anchored by larger patches, such as Stanley Park, that function as a connected system. One of the 10 priority actions in the Biodiversity Strategy is to use park acquisition, tree planting, and the development planning process to expand and connect parks and build the city's ecological network.

INTRODUCED A NEW BIODIVERSITY GCAP TARGET

Embedded in the Biodiversity Strategy is a new Greenest City target for Access to Nature to restore or enhance 25 hectares (ha) of natural areas between 2010 and 2020. This is about the size of VanDusen Botanical Garden, or half the size of Langara Golf Course. The new target will be met by creating and restoring a variety of natural areas on public and private land. It will include habitat restoration in parks, such as salt marsh creation in New Brighton Park and daylighting Tatlow Creek. Smaller projects, including native plant gardens in neighbourhood parks, pollinator meadows in community gardens, rain gardens on street edges, and backyard bird habitats will also contribute to meeting the target.

RESTORED NATIVE TREES IN OUR URBAN FOREST

The target to plant 150,000 trees by 2020 encompasses planting on streets, parks and private lands. One of the initiatives by the Park Board is to restore native forests in larger parks such as Jericho, Musqueam and Everett Crowley Parks. Many of these parks are forested with red alder and black cottonwood

ROSALIND LEBLANC

that established after land clearing; invasive species such as Japanese knotweed and Himalayan blackberry are also common. The goal of forest restoration is to increase the proportion of native evergreen trees, as well as to create a diverse understorey dominated by tall shrubs and sub-canopy. Adding logs helps recreate the structural diversity found in native forests. About 4,100 native trees were planted in parks in 2015. The long-term goal is to increase the forest canopy, while at the same time enhancing habitat for birds, native mammals and other species.

BEGAN DEVELOPING NEW SALT MARSH AT NEW BRIGHTON PARK

The Park Board and the Vancouver Fraser Port Authority have teamed up to develop a two-hectare salt marsh on the eastern side of New Brighton Park. It is a unique initiative to restore the rich intertidal zone—with marsh areas, mud flats, and tidal channels—that used to make up the south shore of Burrard Inlet. Salt marshes are critical habitat for fish, particularly migrating juvenile salmon, which feed along the shoreline of Burrard Inlet as they leave the Indian, Seymour, and Capilano Rivers, and other small streams. The marsh will connect to Creekway Park, created in 2014, as part of the long-term restoration of Hastings Creek in Hastings Park.

CHALLENGES

The five-minute walk target currently measures how much land is in proximity to green space, not how many people or the quality of the green space. As such, it does not factor for population density, constraints to access, or green space located on private land. Staff is looking at realigning this target to better reflect these factors, as well as to focus on true accessibility: not just distance, but how people are reaching green spaces and whether there are barriers, such as major roads and intersections that may hinder access.

NICK PAGE

6 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.

15%
DECREASE
-IN-
TOTAL WATER CONSUMPTION
SINCE 2006

INDICATOR	BASELINE	2015	CHANGE
Total number of instances of not meeting drinking water quality standards	0	0	0
Total water consumption per capita	583 L/person/day (2006)	493 L/person/day	-15%

Reducing water use also reduces energy use, as less pumping and UV treatment is needed to deliver clean drinking water to residents and businesses.

2015-2016 SUCCESSES:

VANCOUVERITES CONSERVED WATER DURING DRY SUMMER

In 2015, a mild winter, low snowpack in the surrounding mountains, and a dry spring all combined for one of the driest summers in recent memory. Due to the dry conditions, water use was actually on the rise in spring 2015—up 12% from the same period in 2014—until Stage 3 water restrictions were implemented. Vancouver residents and businesses took action; even taking shorter showers, letting lawns go "gold" and letting cars get a little dirtier helped reverse the trend and drop our city-wide water use dramatically for the rest of 2015.

APPROVED THE INTEGRATED RAINWATER MANAGEMENT PLAN

When rainwater lands on hard surfaces such as streets, roofs and other impermeable surfaces, it picks up pollutants, which then run into local water bodies. Green and natural infrastructure—including permeable pavement, green roofs, and rain gardens—captures and filters out pollutants before they reach these water bodies, improving water quality for people, animals and flora. In April 2016, the City adopted a long-term target to capture and treat 90% of Vancouver's average annual rainfall through green infrastructure. Moving forward, the City will develop a detailed plan to make this happen. Green and natural infrastructure will not only give the City cleaner local waterways, but will also support the Biodiversity Strategy and help build resilience to heavier and more frequent rainfall events caused by climate change in the future.

VOLUNTEERS REDUCED LAUNDRY WATER USE AT GATHERING PLACE

The Gathering Place Community Centre has been an integral part of the Downtown South community since 1995. Free laundry and shower facilities are among the services it offers to Vancouver's vulnerable populations. Last year, the centre logged over 2,000 showers per month. Looking to help others and ensure best practices, Gathering Place volunteers worked with laundry users to ensure washing machines were running with only full loads. Just this simple measure resulted in significant savings in water and energy used at the facility.

CHALLENGES

Though it could have been much higher if not for the water restrictions, city-wide water use still increased slightly in 2015. Our dry summer last year highlighted the need to conserve. To help drive long-term actions, Council approved the 2016-2020 Clean Water Work Program in November 2015. Priorities include working with industries in the city to increase water efficiency, as well as expanding and accelerating universal water metering.

Unusually high coliform counts have been measured in False Creek, especially during summertime.

The Park Board led a public-information campaign in 2015 to inform the recreational boating community about water quality protection while moored in False Creek and will expand the campaign in 2016. Moving forward, the new Biodiversity Strategy has a priority action to "improve the ecosystem health of False Creek". As well, the City and the Park Board have established a working group to review the issues, identify contamination sources and look at possible solutions alongside partners from Vancouver Coastal Health, Metro Vancouver, Transport Canada and Port Metro Vancouver.

"The beauty of Vancouver water is that it's soft and therefore great for brewing. It's basically a blank slate for brewers to work with, so it gives us more creative flexibility"

Dominic Bernard, Brewing and Brewery Operations Diploma program, Kwantlen Polytechnic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City Hall?
POP UP
CITY HALL
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NON-POTABLE WATER

7 LOCAL FOOD

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

TARGET:

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

38%

INCREASE IN **NEIGHBOURHOOD FOOD ASSETS** SINCE 2010

INDICATOR	BASELINE	2015	CHANGE
Total number of neighbourhood food assets* in Vancouver	3,340 food assets (2010)	4,612 food assets	+38%

** Food assets include: number of community garden plots, farmers markets, community orchards, community composting facilities, community kitchens, community food markets, and urban farms.*

Vancouver has 4,450 community garden plots, an increase from 2014 despite garden removals along the Arbutus Corridor.

2015-2016 SUCCESSES:

PASSED BYLAWS AND GUIDELINES TO SUPPORT URBAN FARMING

Growing food to sell is referred to as urban farming. Urban farming supports many of our green initiatives including improved biodiversity, making use of under-utilized spaces, reducing food import impacts and enhancing Vancouver's green economy. Currently, there are approximately 18 urban-farm businesses and organizations operating in Vancouver, including the Urban Farming Society, a non-profit dedicated to increasing the sustainability of urban farming in Vancouver.

In March 2016, City Council adopted a set of Urban Farm Guidelines and changed bylaws to assist in the development of safe, neighbourly, and productive urban farms and to create a more sustainable food system for Vancouver. Increasing opportunities for food production for urban residents will have positive social, economic and environmental impacts by reducing "distance to fork" and creating opportunities for neighbourhood-focused farms. Cities everywhere are increasingly looking to develop innovative policies that address food-related issues in urbanized areas to create more equitable and sustainable food systems. The Urban Farming Guidelines are a key example of Vancouver's leadership in the area of urban food policy.

SUPPORTED COMMUNITY KITCHENS

A community kitchen is a place for people to gather and prepare meals together. Groups often meet in community facilities, such as churches, neighbourhood houses and community centres. Community kitchens are community-driven programs that play an important role as public facilities for people to learn and share knowledge about nutrition and cooking and to meet new people and build community. The City supports community kitchens through grants and infrastructure upgrades to City-owned buildings that host these kitchens. In 2015, City grants helped to purchase kitchen equipment for the Kivan and Kimount

In 2015, the Sustainable Food Systems Grants distributed $170,000 to non-profits offering programs and services that increase access to food, promote inclusion and participation and build sustainable food systems.

Boys and Girls Clubs in East Vancouver, which provide safe, inclusive places for children and youth to receive nutritious food and to develop skills and knowledge about healthy eating.

SUPPORTED FOOD RESCUE PROGRAMS

Surplus food is wasted every day in Vancouver. Highly nutritious, safe-to-eat produce and other perishable food ends up in the compost or landfill. Food rescue programs see that as an untapped resource and redirect good food to help feed our most vulnerable residents.

Vancouver's Sustainable Food Systems Grants help fund community programs and services that increase access to food, promote inclusion and participation, and build sustainable food systems. In 2015, Frog Hollow and Kiwassa Neighbourhood Houses, and Hastings Community Centre received funding to assist food rescue programs in their neighbourhood, to work together to partner with local food companies to redistribute healthy food. At Kiwassa Neighbourhood House alone, over two tonnes of produce and other food is rescued, sorted and redistributed every week to those in need.

CHALLENGES

Shifting urban form and land use highlights the need for resilient, adaptable urban agriculture. Since 2008, the drive to build urban agriculture infrastructure focused in part on greatly increasing the number of community garden plots through the city. Moving forward, additional resources will be allocated to improvements to help maintain the aesthetics of existing gardens and momentum for public uptake.

8 CLEAN AIR

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

TARGET:

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

ELECTRIC VEHICLES ALLOWED IN **HOV LANES**

INDICATOR	BASELINE	2015	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 Kitsilano and Downtown stations combined*	27 (2008)	3	-89%

** 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 (PM2.5) concentration >25 µg/m³, one hour average nitrogen dioxide (NO_2) concentration >200 µg/m³, 24 hour average sulfur dioxide (SO_2) concentration >20µg/m³,and eight hour ground-level ozone (O_3) concentration >52 ppb.*

The official public launch of the Empire Fields DC fast-charge station—which allows users to get an 80% charge in 20 minutes—adds to Vancouver's existing public network of over 250 Level 2 charging stations.

2015-2016 SUCCESSES:

PROVINCE JOINED ZEV ALLIANCE

In December 2015 at COP21, BC became the 14th jurisdiction to sign on to the International Zero-Emission Vehicle (ZEV) Alliance. Members of the alliance have committed to make all new passenger vehicles purchased in their jurisdictions ZEVs by 2050. Achieving this will accelerate the global transition to ZEVs and could reduce transportation-sector climate impacts by more than one billion tonnes of carbon dioxide emissions per year by 2050, lowering global vehicle emissions by about 40%. ZEVs in use today include battery-electric, plug-in hybrid, biofuel, and hydrogen fuel cell vehicles.

The City supports this move, which is aligned with the City's Renewable City Strategy goal of renewably powered transportation. Since electricity in BC is already more than 93% renewable, increasing use of electrically powered personal vehicles will be a key component of this transition. And as the provincial government regulates fuel standards, the city and its residents will benefit greatly from the strong provincial policies that will be necessary to achieve the goals of the International ZEV Alliance.

PROVINCE RENEWED ZEV INCENTIVES

In April 2015, the Government of BC renewed its incentive for clean-energy vehicles, which includes electric vehicles, plug-in hybrid electric vehicles and hydrogen fuel cell vehicles. The previous incentive program was so well subscribed that the three-year funding was exhausted in just 10 months. In addition to the vehicle incentive, which provides a rebate of up to $6,000, prospective vehicle buyers can also receive up to $3,000 in the provincial Scrap-It program for trading in older vehicles. The provincial government is also providing up to $4,500, or 75% of installation costs, for electric vehicle charging stations in apartment and condo buildings.

The number of electric vehicles registered to Vancouver residents nearly doubled in 2015.

CHALLENGES

2015 was the hottest year globally, since records began in the 19th century, beating out the previous record set in 2014. The warmer temperatures, coupled with lower snowpack in many regions, led to a number of wildfires along the south coast of BC. Although they did not occur within Metro Vancouver, the wildfires released large amounts of particulate matter into the local airshed, which can have serious effects on people with asthma or other respiratory problems, children, and the elderly. The extent of smoke was serious enough for Metro Vancouver to issue air quality advisories. With longer, drier summers expected as a result of the changing climate, wildfires are expected to occur earlier in the year and more frequently. The City will need to continue working with local governments in the region to reduce future risk and severity.

Past studies have shown that lower prices at the gas pump cause demand for SUVs and trucks to rise. This has an impact on local air quality. However, recent data shows electric vehicle (EV) sales in Vancouver, BC and throughout Canada continue to increase. Canadian EV sales were up 33% in 2015 over 2014; in Vancouver, the number of EVs registered to residents doubled. Here in BC, the low cost of electricity is just one advantage of electric vehicles. Many EV owners also cite performance and driving experience as well as environmental benefits as their reasons for choosing an EV.

Landlords and strata corporations are regulated provincially; however, currently, no laws exist to compel them to allow EV charging in their buildings. The ability to charge at home is understandably important to users, so the ability for tenants and strata lot owners to install and use charging stations is key to widespread EV uptake. The City is advocating that the provincial government update the Strata Property Act to include “right to charge” requirements, similar to those already in place in California, Hawaii, and other jurisdictions.


ELECTRIC VEHICLES ONLY
TAXI PARKING ONLY
STALLS RESERVED
for plug-in electric vehicles while charging
Meter #14
PAY HERE
for Parking

9 GREEN ECONOMY

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

TARGETS:

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

$31 BILLION ESTIMATED **VALUE OF VANCOUVER'S BRAND**

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

** New green jobs and greening business surveys will be conducted in fall 2016.*

Over 200 businesses, representing over 60,000 employees, pledged their support for strong climate action through the new Climate Pledge.

2015-2016 SUCCESSES:

SHOWCASED VANCOUVER BUSINESSES IN PARIS AND AT HOME

Vancouver businesses shone on the world stage in 2015 and 2016. The Vancouver Economic Commission (VEC) supported over 30 businesses that took part in the activities at the UN Climate Conference in Paris in 2015 (also known as "COP21"), to access speaking opportunities, connect with Canada's ambassador to France in Paris, and build stronger connections to Europe. The VEC also promoted Vancouver as an international hub for green business, presenting to over 600 business leaders and investors at the World Climate Summit. The Plastic Bank, a local company, collected a "Sustainia Award" for social innovation with their #socialplastic recycling program.

In part as a result of the VEC's effort in Paris, Vancouver's long-standing GLOBE green-business conference (in February 2016) brought the world to Vancouver, attracting more than 12,000 attendees. Building on the huge interest at COP21 to learn more about Vancouver's green economy opportunities, the VEC hosted trade delegations, investor events, and company tours to connect the city's many green solutions providers with global investors and clients. Ten companies brought forward real-life business challenges, which 100 experts then explored during a half-day Renewable Energy Challenge workshop.

CREATED THE CLIMATE PLEDGE

Ahead of COP21, the VEC created the Climate Pledge and rallied over 200 businesses—representing over 60,000 employees—to pledge support for strong climate action and a renewable energy future. Notable companies such as TELUS, MEC, the Vancouver Aquarium and Hootsuite were among the signatories. Over 80% of the companies pledged support for Vancouver's vision to shift to 100% renewable energy by 2050, and more than 50% pledged to set their own science-based carbon reduction targets or to move towards renewable energy sources.

EXPANDED THE GREEN AND DIGITAL DEMONSTRATION PROGRAM

Last year, the City of Vancouver and the VEC announced a collaborative program for local entrepreneurs and startups called the Green and Digital Demonstration Program (GDDP). The GDDP allows innovators to test their products or technologies on city-owned assets. It helps businesses to quickly scale, commercialize, and access new overseas markets, using VEC's support and the City as a reference. Eighty companies have applied to the program to date.

Early successes include TSO Logic's data-centre optimization testing, which resulted in immediate recommendations to the City for reducing its energy


SATURNA GREEN SYSTEMS

consumption and carbon footprint. Meanwhile, Saturna Green Systems, a fully integrated electric scooter sharing service, has received significant media attention due to participation in the program.

SUPPORTED THE CIRCULAR ECONOMY

In 2015, the VEC launched UpcycleVancouver.com to highlight local circular economy businesses and help with "matchmaking" deconstruction professionals, material recovery and reuse outlets, and the upcycle design community. The community already has 100 active members.

CHALLENGES

The amount of light-industrial space available in Vancouver is limited, and it can be a struggle for businesses, especially startups and emerging industries like clean tech, to find industrial facilities that suit their spatial needs. Businesses are co-locating to solve this problem, which can often have additional circular-economy benefits. Work is currently underway by the VEC and the City to develop a long-range economic strategy and local area plan for the False Creek Flats, an area with significant opportunities for the circular economy, smart logistics, space matching, and solutions-based regulation.

"Seeing the creativity and diversity of entrepreneurs and industrial businesses in the False Creek Flats was inspiring. Vancouver Economic Commission's approach to identifying and supporting sustainable new business models is something that other cities should keep a close eye on."

David Gilford, New York City Economic Development Corporation


Electra Meccanica
Beautiful British Columbia
CE7 59E

10 LIGHTER FOOTPRINT

GOAL: ACHIEVE A ONE-PLANET ECOLOGICAL FOOTPRINT

TARGET:

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

13,400 PEOPLE EMPOWERED TO TAKE ACTION ON GREENEST CITY

INDICATOR	BASELINE	2015	CHANGE
Proxy: Number of people empowered* 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 empowered to take action (2011)	13,400 people empowered to take action	+12,800

** "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).*

In partnership with the Vancouver Foundation, the Greenest City Fund awarded grants to 573 community initiatives over the four years of the program, totalling approximately $1.9 million.

2015-2016 SUCCESSES:

SUPPORTED STUDENT AND RESIDENT-LED GREEN INITIATIVES

CityStudio students once again brought their innovation and creativity to the streets of Vancouver in 2015. YIMBY Vancouver (Yes In My BackYard) sought to foster a more inclusive community for homeless citizens. At four cafes along Commercial Drive, patrons were encouraged to purchase an extra item, in the form of an anonymous voucher, to post on a YIMBY board to be later redeemed by a homeless citizen at the cost of kindness. This channelling of peoples' kindness led to over 235 YIMBY vouchers redeemed in one week, and the voucher system has caught on in other cities, inspiring the development of a toolkit to empower future YIMBYists.

Over four years of the Greenest City Fund, the Vancouver Foundation in partnership with the City of Vancouver distributed $1.9 million to fund 573 projects. In 2015, over $550,000 was granted to 136 worthy projects. One standout was Sustainability at Work in False Creek Flats: the delivery of in-person interactive courses and resources to False Creek Flats businesses and building owners around green buildings, sustainable purchasing, and zero waste. Another project, Build-a-Bicyclist, provided newcomers to Vancouver with a bicycle and gear, as well as a safety course, to enable them to integrate city cycling into their daily lives.

ENGAGED THOUSANDS IN THE NEXT PHASE OF GREENEST CITY

The Greenest City 2020 Action Plan received a "refresh" in 2015. Over 50 new actions were added to help us move closer to realizing our targets, and the public provided their input during the "Bright Green Summer" in 2015. Through events and celebrations, Pop-Up City Hall, and a Pecha Kucha grand finale, over 46,000 people were included in this process, of which over 13,000 were engaged (in-person, online, and social media feedback). All of the feedback was used to contribute to and refine the Greenest City actions that will get us to 2020.

CHALLENGES

Measuring Vancouver's ecological footprint is very complex, and much of the required data has been unavailable since 2006, when the last national long-form census occurred. This was reinstated for 2016, and now the City is partnering with experts to redevelop and update this measure of our community's environmental impact.

The City has limited influence in changing people's daily habits. Through engaging people via the personal Climate Change Action Pledge launched in late 2015, we can measure the pulse of resident involvement in the Greenest City Action Plan. Success, however, ultimately relies on local action by community groups and individuals.

After four successful years, the Greenest City Fund is going to get a refresh, just like the plan itself. The City of Vancouver and the Vancouver Foundation are grateful for the support and interest in the Fund over the past four years. The City of Vancouver is committed to continuing to enable the community in activating projects that help achieve the Greenest City Goals. Staff are currently exploring how the Fund will continue in 2017 and beyond.

"It's not just about the coffee. It's the small act behind it."

Jason, homeless Vancouver resident and recipient of a YIMBY voucher

NICK PAGE

WALKING THE TALK

GREEN OPERATIONS

TARGETS:

- 50% reduction in GHGs from City operations from 2007 levels
- 70% waste diversion in public-facing City facilities, and 90% waste diversion in all other City-owned facilities
- Reduce water use in City operations by 33% from 2006 levels

INDICATOR	BASELINE	2015	CHANGE
Total tonnes of CO_2e emissions from City operations	490,000 tCO_2e	250,000 tCO_2e	-49%
Total waste diversion rate in City facilities and operations	--% (public-facing facilities) 70% (other City-owned facilities)	67% (public-facing facilities) 84% (other City-owned facilities)	--% (public-facing facilities) 14% (other City-owned facilities)
Total water use in City operations	2,550,000 m^3 (2006)	2,055,000 m^3	-19%*

** Without the benefit of universal water metering of our civic facilities, metric tracking is a best estimate only. The available data and extrapolation indicates a civic water reduction of 19% from the 2006 baseline. The accuracy of the metric will increase through planned water meter installations at prioritized City buildings beginning in mid-2016.*

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 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 toxic materials, and reducing water consumption in City operations.

2015-2016 SUCCESSES:

CUT WATER USE IN LIBRARY SQUARE

Heating inside the Central Library downtown comes from steam. As energy is extracted from the steam, it turns to hot water (called condensate), which must be cooled down with more water before it can be sent to the sewers. Like many other downtown buildings with this system, this process wasted large amounts of otherwise perfectly good water. Improving this was a priority.

Staff implemented a creative solution, rerouting condensate through a heat exchanger (like a radiator in a car) to recover some of this excess heat. The cooler condensate that comes out means water use has drastically decreased. The modification also saves energy and reduces greenhouse gas emissions and, best of all, it cost almost nothing to implement—just a simple re-routing of pipes and an extra pump.

CONTINUED REDUCING GREENHOUSE GAS EMISSIONS FROM CITY BUILDINGS

The City owns or operates nearly 600 buildings, encompassing over 11,000,000 square feet of floor space. The City's Facilities Energy Management Strategy focusses on upgrading mechanical and electrical systems, optimizing building system performance, and changing the energy-saving behaviour of staff. The City also supports green building standards for new City buildings and renewable or low-carbon energy opportunities.

Retrofit programs at 31 of the largest City-owned buildings have decreased GHG emissions by 10%, and saved over $500,000 in annual energy costs. Most recently, the Police Tactical Training Centre reduced its natural gas use by 43% over a four year period, simply by optimizing its ventilation and lighting control systems.

IMPROVED RECYCLING THROUGH CIVIC ZERO-WASTE PROGRAM

The City continues to improve the corporate waste-diversion program that began four years ago. In 2015, the City achieved an 84% waste diversion rate in City buildings (such as City Hall and the Crossroads building at 507 West Broadway). City staff have set a target of 90% by 2020.

VANCOUVER POLICE: PART OF THE SUSTAINABILITY STORY

While keeping Vancouver safe, the Vancouver Police Department (VPD) is also part of the City's sustainability efforts. The "POPATCH" is a 700-square-foot vegetable garden created on the rooftop of VPD headquarters by VPD staff volunteers in 2013. A large portion of the food is donated to the Urban Native Youth Association (UNYA) for use in their culinary program, as well as the nearby Lookout Shelter. In 2015, through a partnership with Hives for Humanity, two bee hives were added to the rooftop. Beekeeping, also known as apiculture, supports urban biodiversity and strengthens positive relationships between police and community partners.

Part of making Vancouver a more bike-friendly city is addressing the issue of bike theft. Only about 5% of the 2,000 bikes stolen every year in Vancouver are ever reunited with their owners. In 2015, the VPD launched 529 Garage, a city-wide bike registry program in partnership with Project 529. Users register photos and details of their bike, and serial-numbered stickers act as a deterrent and provide a unique identifier for each bike registered. As soon as a bike is taken, an owner can send out an alert across the network of 529 Garage users to be on the lookout. Since late 2015, this crowd-driven solution has already returned five out of seven serial-numbered stolen bikes to their happy owners.

Greenhouse gas emissions from all City of Vancouver-owned buildings have dropped by 23% between 2007 and 2015. Emissions from fleet operations have decreased by 13% over the same period.

529 Garage reunites stolen bike with happy owner

GET INVOLVED!

We love our city. Vancouver is continually rated one of the most livable cities in the world, and we want to make it even more amazing. Last year, at the half-way point of the implementation of the GCAP, we upped the ante by introducing over 50 new priority actions. And now with only four years left to 2020, and a long-term plan to be powered by 100% renewable energy before 2050, working together with residents, businesses, and industry will be the only way we can succeed in the work that lies ahead.

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.

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CITY OF VANCOUVER | GREENEST CITY

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