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CC: ["City Manager's Correspondence Group - DL"](#)  
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Date: 12/9/2020 3:06:06 PM  
Subject: Memo - Green Operations  
Attachments: Memo to Mayor and Council - Green Operations 2.0.pdf

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Dear Mayor and Council,

Attached is a memo and slide deck from Gil Kelley, outlining our new corporate Green Operations Plan, for information only. A few points to highlight:

- ☐ The original Green Operations Plan was developed in 2013 and is the City's strategic plan for demonstrating leadership in sustainability and sharing what we learn with the community.
- ☐ The Green Operations Plan has been highly successful in positioning Vancouver as a leader in corporate sustainability and sunsets at the end of this year.
- ☐ Green Operations 2.0 is a great opportunity to continue to demonstrate leadership alongside both the Climate Emergency Action Plan and Vancouver Plan, as well as enhance community sustainability efforts.
- ☐ This work not only enables the City to advance climate action and sustainability; it can also reduce operating costs through improved efficiencies and reduced waste, as seen through the success of the first plan.

If you have questions about this, please feel free to contact Doug Smith, Sustainability Director at [doug.smith@vancouver.ca](mailto:doug.smith@vancouver.ca)

Best,  
Sadhu

**Sadhu Aufochs Johnston** | City Manager  
Office of the City Manager | City of Vancouver  
604.873.7627 | [sadhu.johnston@vancouver.ca](mailto:sadhu.johnston@vancouver.ca)

Pronouns: he, him, his



*The City of Vancouver acknowledges that it is situated on the unceded traditional territories of the Musqueam, Squamish, and Tsleil-Waututh peoples.*

## MEMORANDUM

December 9, 2020

TO: Mayor and Council

CC: Sadhu Johnston, City Manager  
Paul Mochrie, Deputy City Manager  
Karen Levitt, Deputy City Manager  
Lynda Graves, Administration Services Manager, City Manager's Office  
Gail Pickard, Acting Civic Engagement and Communications Director  
Rosemary Hagiwara, Acting City Clerk  
Anita Zaenker, Chief of Staff, Mayor's Office  
Neil Monckton, Chief of Staff, Mayor's Office  
Alvin Singh, Communications Director, Mayor's Office  
Donnie Rosa, General Manager, Vancouver Board of Parks and Recreation  
Lon LaClaire, General Manager, Engineering Services  
Nick Kassam, General Manager, Real Estate and Facilities Management

FROM: Gil Kelley  
General Manager, Planning, Urban Design and Sustainability

SUBJECT: Corporate Green Operations Plan

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The purpose of this memorandum is to provide an overview of the City's new corporate Green Operations Plan, including how we are leading by example in the recently approved Climate Emergency Action Plan.

The original Green Operations Plan was developed in 2013 and is the City's strategic plan for demonstrating leadership in sustainability and sharing what we learn with the community. This plan, which has been highly successful in positioning Vancouver as a leader in corporate sustainability, sunsets at the end of 2020. Green Operations 2.0 is a great opportunity to continue to demonstrate leadership alongside both the Climate Emergency Action Plan and Vancouver Plan, as well as enhance community sustainability efforts.

The Green Operations Plan is a five-year action plan with targets set for 2030 that align with the Climate Emergency Action Plan and other sustainability plans, such as Zero Waste 2040 and the Rain City Strategy. The plan ensures that corporate actions, such as fleet replacement and building retrofits, are done in alignment with the targets we have set for the community. This work not only enables the City to advance climate action and sustainability; it can also reduce operating costs through improved efficiencies and reduced waste.

The development of this plan was overseen by a cross-departmental Steering Committee of goal owners and with significant staff engagement undertaken across the City. Actions put forward were reviewed for resource requirements, alignment with City strategies, and potential to demonstrate leadership to the community.

Please find attached:

- A high-level overview of the new plan
- A full list of targets and actions

Questions about the Green Operations Plan can be directed to [doug.smith@vancouver.ca](mailto:doug.smith@vancouver.ca)

A handwritten signature in black ink, consisting of a large, stylized 'G' followed by a horizontal line extending to the right.

Gil Kelley, FAICP  
General Manager, Planning, Urban Design and Sustainability  
604.873.7456 | [gil.kelley@vancouver.ca](mailto:gil.kelley@vancouver.ca)

# green operations plan

**leading by example  
in the climate emergency**

MEMO TO COUNCIL

Prepared by Rachel Telling  
Planning, Urban Design & Sustainability





# background



The Green Operations Plan is the corporate strategic plan that details the City's sustainability targets and actions for walking the talk by greening internal operations and demonstrating leadership to the community.

The first plan was developed in 2013 in response to the release of the Greenest City Action Plan (GCAP) and was formally integrated with GCAP, including the annual report to Council.

The current plan comes to an end this year.

# green operations plan 1.0

## ZERO CARBON

GHGs

-43%

## progress

Very successful plan, establishing the City as a leader in corporate sustainability in North America, especially for buildings and fleet.

The original plan was organized around 3 broad goals of zero waste, zero carbon, and healthy ecosystems – themes that also ran through GCAP.

## ZERO WASTE

waste diversion

82%

*public-facing*

89%

*other City-owned*

## HEALTHY ECOSYSTEMS

water use

-34%



# green operations plan 1.0

## highlights

In addition to sustainability, the plan also had significant cost savings for the City.  
For example:

- \$2.7M saved in natural gas costs since implementation of the plan in 2013, due to reduced natural gas consumption in City owned buildings
- \$2.25M saved annually by redirecting or repurposing the volumes back into aggregates and asphalt for Engineering projects and not having to buy new

### ZERO CARBON

#### HEAT PUMP AT CITY HALL

carbon pollution down 32%

### ZERO WASTE

#### LOWER WASTE CONSTRUCTION

200,000 tonnes reused every year

### HEALTHY ECOSYSTEMS

#### HEALTHIER PARKS

banned neonic pesticides in parks

# emerging priorities

The current plan ends this year, but in addition it is a great opportunity to respond to City plans and policies that have been approved since the first plan was developed in 2013.

This is also a great opportunity to continue City leadership alongside the Vancouver Plan and demonstrate leadership to the community for the Climate Emergency Action Plan.





# green operations plan 2.0

**10-year targets  
5-year actions**

**2 tiers of action:  
priority actions  
(‘big moves’)  
+ demonstrating  
leadership**

**New goal area:  
staff leadership  
to address gap  
identified**

**Integrating  
opportunities through  
COVID-19 response**  
Operational efficiencies  
and cost savings

# green operations plan 2.0

Climate Emergency  
Action Plan (CEAP)

\* new goal area \*

**ZERO CARBON**

**ZERO WASTE**

**HEALTHY  
ECOSYSTEMS**

**STAFF  
LEADERSHIP**

**8 targets      52 actions**

*Full list of targets and actions provided as appendix*

# zero carbon leading by example in the climate emergency

**Overall 2030 target**



GHGs

**-60%**



**staff  
commute**

**2/3**

sustainable modes



**vehicle km  
travelled  
(fleet EVs)**

**50%**



**GHGs  
(civic buildings)**

**-50%**



**embodied  
GHGs  
(civic buildings)**

**-50%**

**CEAP Big Move 2**

**CEAP Big Move 3**

**CEAP Big Move 4**

**CEAP Big Move 5**

*Mirroring and advancing Climate Emergency Action Plan (CEAP) targets*





# zero carbon leading by example in the climate emergency

## *highlighted action*

**All new heating and hot water systems in city-owned facilities to be zero emissions, and all capital replacement and maintenance systems to be zero emissions where feasible, with appropriate staff training and signage provided**

In 2018, we installed a waste-heat recovery system and replaced the gas boilers with heat pumps at Kitsilano Community Centre. Now the ice rink heats the rest of the building, cutting carbon pollution by 85%.



# **zero carbon** **leading by example in the climate emergency**

*highlighted action*

**Transition all small landscaping  
equipment to zero emission  
equivalents**



**2030 target**



**corporate  
waste -20%**

**zero waste**

**highlighted action**

**single-use item-free policy  
for all City operations**

*Responds to Council motion: Nov 2019*



**engineering  
construction  
waste diverted 50%**

**recycled content  
in construction policy**



*2030 target*



**potable  
water**

**-10%**



**capture +  
clean first**

**48**  
mm/day

*From civic facilities undergoing  
renewal and redevelopment*

## **healthy ecosystems**

*highlighted actions*

**Install operational water  
meters at prioritized City sites**

**Pilot Salmon Safe  
certification  
+ focus on  
pollution prevention**



# healthy ecosystems

*2030 target*



healthy  
habitat

40%

of City-owned land

*highlighted actions*

**invasive species management plan +  
limited-access park areas**

# staff leadership *\* new goal area \**

*2030 target*



**staff engaged  
with Green  
Operations**

**50%**

*highlighted actions*  
**sustainability staff training +  
telling our stories**



# green operations reporting

zero-carbon targets  
as part of CEAP updates

ANNUALLY TO COUNCIL

all targets

ANNUALLY TO CLT

A woman in a safety vest is kneeling next to a white City of Vancouver waterworks vehicle. She is working on a manhole cover. The vehicle has the City of Vancouver logo and 'Waterworks Operations' written on it. The background shows a residential street with houses and trees.

please see appendix  
for full list of targets  
and actions

## Questions?

Questions about the plan can be directed to  
[rachel.telling@vancouver.ca](mailto:rachel.telling@vancouver.ca)



Green Operations Plan 2.0

1. Zero Carbon

Targets		Notes
1. By 2030, corporate carbon emissions will be reduced by 60%, compared to a 2007 baseline.		
2. By 2030, 2/3s of staff (commuting) trips will be by active transportation, telecommuting, or transit.		aligns with Climate Emergency Big Move 2
3. By 2030, 50% of the kilometres driven by on-road City vehicles will be by zero emission vehicles.		aligns with Climate Emergency Big Move 3
4. By 2030, the carbon pollution from City building operations will be cut in half from 2007 levels.		aligns with Climate Emergency Big Move 4
5. By 2030, the embodied emissions from new civic buildings will be reduced by 50%, compared to a 2018 baseline.		aligns with Climate Emergency Big Move 5
Priority Action	Lead department(s)	Timeline
1. Establish a carbon-reduction accounting and reporting framework (at the program/project level where possible) that gives transparency to cost, contributions to carbon goals, responsibilities, etc.	Sustainability	Complete by 2021
2. Update the Sustainable Commuting Program to accelerate long-term shifts towards staff commuting by walking, cycling, or transit. Establish and implement a best practice standard for end-of-trip facilities.	HR, REFM, Sustainability	Beginning 2022; target 50% by 2025.
3. All non-emergency light-duty passenger vehicle purchases to be electric, and electric or low-carbon options considered for all other fleet and equipment purchases. <i>[FUNDING-DEPENDENT]</i>	ENG	Beginning immediately; funding-dependent.
4. All new heating and hot water systems in city-owned facilities to be zero emissions, and all capital replacement and maintenance systems to be zero emissions where feasible, with appropriate staff training provided.	REFM	Beginning immediately
5. Develop a refrigerant management plan for transitioning to low global warming potential refrigerants used in city owned buildings, and monitor and manage leakage of refrigerants.	REFM	Beginning in 2021; complete by mid-2022
6. Assess and minimize operational and embodied emissions for construction of all new civic buildings and facilities, noting that new buildings are already being built to zero operational emissions.	REFM, Sustainability	Beginning immediately at 40%; working towards 50% by 2030.
7. Revise the corporate work from home policy to support the continuation of remote work, including the tracking and communications of carbon reductions.	HR	Complete by 2021; based on learnings/appetite to do so from COVID experience.
8. 25% of all corporate spend on products and materials to be low or no carbon.	All; data with SCM	Complete by 2025
Leadership Action	Lead department(s)	Timeline
9. Transition all small landscaping equipment to zero emission equivalents.	Park Board	Complete by 2023
10. Develop and implement low carbon catering guidelines for City-hosted meetings and events that accommodate culturally appropriate requirements/foods.	Sustainability, ACCS	Complete by 2022
11. Include all material Scope 3 emission sources in corporate inventory reporting.	Sustainability	Complete by 2023; set targets for reductions from 2025-30.
12. Replace city-wide streetlights with LEDs, as per the Outdoor Lighting Strategy.	ENG	Complete by 2025
13. Explore embodied carbon emission reductions to infrastructure projects.	ENG	Beginning immediately
14. Apply annual increases to the internal corporate carbon price to inform organization-wide policy, business, and operational decisions.	Sustainability, Finance	Beginning 2021
15. Continue to invest in MFA BC fossil fuel-free screened funds and identify further opportunities for divestment from fossil fuels, reporting regularly on progress.	Treasury Services	Beginning immediately
16. Integrate a climate risk assessment into Engineering’s Project Management Framework.	Sustainability, ENG	Complete by 2021



2. Zero Waste

Targets		Notes	
1. By 2030, reduce corporate waste production by 20%, compared to a 2019 baseline.			
2. By 2030, divert a minimum of 50% of overall engineering construction excavation waste for repurpose or recycling.			
Priority Action		Lead department(s)	Timeline
1. Build on the successful corporate zero waste program, ensuring a standard across all sites and incorporating additional material streams where possible.		REFM	Beginning immediately
2. Develop and implement a single-use item-free policy for all City operations.		REFM, ENG, Sustainability	Complete by 2021
3. Develop and implement a policy for recycled content in construction fill aggregates (e.g., asphalt) that is based on evolving processes and production best practices.		ENG	Complete by 2024
4. Retain, deconstruct, and/or recycle all civic buildings as case studies for community partners.		REFM, ENG	Beginning immediately
Leadership Action		Lead department(s)	Timeline
5. Develop and implement a zero waste policy for all City-hosted meetings and events.		PDS, REFM (All)	Complete by 2022
6. Explore a pilot program loaning reusable dishes for events with one of the community centres.		REFM, ACCS	Complete by 2022
7. Reuse or recycle all staff uniforms.		VPD, VFERS, VCT, ENG, Park Board	Complete by 2023
8. Explore opportunities for reducing non-essential single-use water bottles.		REFM, PDS, ENG, Park Board	Complete by 2023
9. Prioritize corporate purchase, lease, and ownership options that retain transparency in end of life processes, e.g., for IT hardware, cell phones.		SCM, Sustainability, IT (All)	Beginning immediately
10. Implement zero waste education and engagement for staff, e.g., campaigns around certain items or targeted at certain worksites; support for hard-to-recycle items.		REFM	Beginning 2021



3. Healthy Ecosystems

Overarching vision for water targets and actions: One Water recognizes all water has value and strives to consider the entire urban water cycle in water management and infrastructure planning in a way that works in harmony with nature. Our vision is that water defines our identity as a city and people, and shapes a more livable, equitable, and resilient city.

Targets	Notes	
1. By 2030, reduce corporate potable water use by 10% compared to a 2019 baseline.	Without universal water metering of our civic facilities, metric tracking is a best estimate only based on available data and extrapolation. Accuracy will increase through continued water meter installations at prioritized City buildings.	
2. Starting immediately, all civic facilities undergoing renewal and redevelopment will be designed to target capturing and cleaning the first 48mm of rainfall per day.		
3. By 2030, 40% of all city-owned lands will provide healthy habitat* and contribute to healthy ecosystems. <i>[STRETCH TARGET]</i>	“Healthy habitat” defined as “naturally managed area”	
Priority Action	Lead department(s)	Timeline
1. Install operational water meters at all City-owned or controlled buildings and facilities where it is deemed necessary.	Water Conservation	Complete by 2025
2. In addition to the installation of water pressure reduction equipment at City-owned or controlled buildings and facilities, adjust water pressure to a lower setting wherever possible in an effort to conserve water and prevent leaks.	Water Conservation, REFM	Complete by 2025
3. Implement a departmental user pay system for water on all City-owned or controlled buildings and facilities.	Water Conservation, Finance, REFM	Complete by 2025
4. Park Board to develop and implement an updated Water Conservation Action Plan 2020-2025, with a focus on potable water savings.	Park Board, Water Conservation	Complete by 2021
5. Develop and budget for three neighbourhood or block scale pilots that demonstrate One Water over the next 5 years.	Park Board, Integrated Sewer and Drainage Planning, Green Infrastructure	Complete by 2025
6. Seek Salmon Safe certification at one or more civic facility and share the experience and lessons learned to inform future facilities policy.	REFM, Park Board	Complete by 2022
7. Implement an Invasive Species Management Plan for City-owned lands and parks.	Environmental Services, Park Board	Complete by 2025
8. Establish riparian setbacks in new and existing streams impacted by new or ongoing Parks/City operations; consider setbacks for habitat, flood protection and recreational connectivity. <i>[STRETCH ACTION]</i>	Park Board, REFM, PDS	Complete by 2025
9. Restore or enhance 30ha of natural area within parks, with a view to increase the portions of parks which are ‘naturally managed’ (including ecological horticulture, pollinator meadows, and forest with unmown understory).	Park Board	Complete by 2025
10. Establish 15 ha of limited access park areas for natural vegetation restoration and/or urban wildlife habitat without human and pet disturbance.	Park Board	Complete by 2025
Leadership Action	Lead department(s)	Timeline
11. Showcase water conservation projects in public places e.g., via signage, demonstration projects, art etc. to educate and train staff on water conservation.	Water Conservation, Park Board	Beginning 2021
12. Report out on learnings from the design, construction, operations and maintenance of innovative green rainwater infrastructure implemented at civic facilities to date.	Green Infrastructure, Sustainability, REFM	Beginning 2021
13. Review and refresh Operations and Maintenance protocols/manuals for green infrastructure assets at civic facilities.	Green Infrastructure, Sustainability, REFM	Complete by 2023
14. Review and update Bird-Friendly landscape and institutional building design and retrofit guidelines for all new parks, park renewals, and all new and renewed City-owned sites.	Park Board, REFM, PDS	Beginning 2025
15. Implement capacity-building and training on healthy ecosystems for Parks and City Operations staff (e.g., bird-friendly landscape management, Green Operations Crew Talk series, low-mow protocols). <i>[FUNDING-DEPENDENT]</i>	Park Board, REFM, ENG	Beginning 2025
16. Create biodiversity-focused positions and/or training in Park Operations. <i>[FUNDING-DEPENDENT]</i>	Park Board	Complete by 2025
17. Develop technological solutions to support achievement of the healthy habitat target/actions, based on the Hard Asset Inventory and Condition Assessment lead by Park Development.	Park Board	Complete by 2025



4. Staff Leadership

Target		Notes	
1. By 2030, 50% of staff are engaged with Green Operations.		As measured through a regular survey. "Engaged" defined as having taken action in their own work; regularly following Green Operations in CityInsider; taken a Green Operations course, workshop, lunch-and-learn; used Green Operations tools and resources available on CityWire, etc.	
Action		Lead department(s)	Timeline
1. Develop and implement an online 'Sustainability 101' theoretical training course for staff.		Sustainability	Complete by 2021
2. Develop and implement a series of topic-specific deep-dive lunch-and-learns and tours, delivered by staff across various departments who are subject-matter experts.		Sustainability (All)	Complete by 2022
3. Develop and implement topic-specific training for operational staff to support the targets and actions in the other Green Operations goal areas.		Sustainability to support relevant departments	Beginning 2022
4. Update new CityWire site as a sustainability hub for staff, with up-to-date tools and resources to enable continuous learning and application.		Sustainability, Internal Comms	Complete by 2022
5. Promote the Green Operations Fund and leverage it to support staff champions.		Sustainability	Beginning 2021
6. Integrate sustainability into staff hiring and onboarding.		HR	Complete by 2022
7. Tell Green Operations success stories through a regular sustainability section in CityInsider, publishing best-practice case studies both internally and externally, and through 'Building the City We Love' Green Operations videos.		Sustainability, Internal Comms (All)	Beginning 2021
8. Explore a sustainability mentorship program to connect established leaders in Green Operations work with those interested in exploring this work.		Sustainability	Complete by 2023
9. Explore how best to engage meaningfully with staff from VPD, VPL, VFRS, VCT and CoV field staff on Green Operations; develop and deliver content accordingly.		Sustainability, VPD, VFRS, VCT, VPL, ENG, Internal Comms	Beginning 2022