



GreenCare™  
**2021**  
Environmental Performance  
Accountability Report

# Environmental sustainability is everyone's story.



Provincial Health  
Services Authority  
Province-wide solutions.  
Better health.



NAVIGATION

► **Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
 Together.**

**Writing the Story We Want,  
 Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
 Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

# Table of Contents

**Executive Message** ..... 3

**1.0 Executive Summary**..... 5

- ▶ 1.1 Executive summary ..... 6
- ▶ 1.2 The 2021 Dashboard..... 8

**2.0 Our Sustainability Story**..... 14

- ▶ 2.1 PHSA's commitment ..... 15
- ▶ 2.2 The Energy and Environmental Sustainability team ..... 17
- ▶ 2.3 Building and operating for energy and environmental sustainability ..... 18

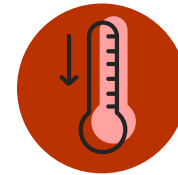
**3.0 We're Finding Solutions: Together.** ..... 20

- ▶ 3.1 Our Focus Areas ..... 21

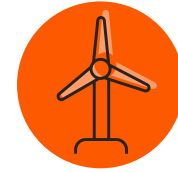
**4.0 Writing the Story We Want, Now and in the Future** ..... 49

**References** ..... 50

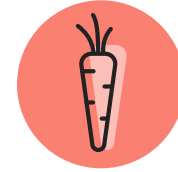
# Our Focus Areas



**Climate Change**



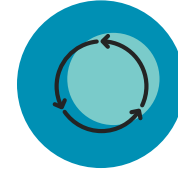
**Energy and Carbon**



**Food**



**Leadership and Innovation**



**Materials**



**Transportation**



**Water**



This is an interactive report. Easily navigate to different sections by clicking on the text headings.

To view a different health organization report, select it from the navigation bar to the left. Each report details progress and achievements in the seven Focus Areas.



NAVIGATION

---

**Table of Contents**

▶ **Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

---

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

3 Provincial Health Services Authority

# Executive Message





NAVIGATION

Table of Contents

▶ Executive Message

Executive Summary

Our Sustainability Story

We're Finding Solutions:  
Together.

Writing the Story We Want,  
Now and in the Future

References

DOWNLOADS

PHSA Climate Change  
Accountability Report

Vancouver Coastal Health EPAR

Providence Health Care EPAR

Fraser Health EPAR



Wildfires. Heat dome. Flooding. The impacts of the extreme weather events we have witnessed over the past years — many of which occurred in our own backyards — have demonstrated the very real impacts that our current climate reality can have on our families, our communities, and of course, the patients and clients we serve. In reflecting on all our staff have done during these emergencies, in addition to facing the ongoing challenges with the COVID-19 pandemic and the toxic drug crisis, I am inspired by their commitment and dedication to put the well-being of others, our patients and our communities, first.

Every year, we acknowledge the hard work, commitment and progress of everyone at Provincial Health Services Authority (PHSA) in their continuing efforts to achieve environmental sustainability in our health system through the Environmental Performance Accountability Report (EPAR). This year's report highlights that, in addition to striving to provide equitable and culturally safe care for all, PHSA staff across the province have truly committed themselves to improving environmental health and taking action to foster a movement that creates societies focused on well-being.

For the past 12 years, PHSA has taken measurable action to reduce our carbon footprint and environmental impacts on our health-care system thanks to the continued leadership of our Energy and Environmental Sustainability team, the GreenCare network and many of our Green+Leaders. Our Projects and Planning teams as well as Facilities Maintenance and Operations have prioritized and executed the design and construction of health-care facilities and infrastructure, along with operational changes that result in tangible environmental and health outcomes. These outcomes include cleaner air, which leads to less respiratory and cardiovascular disease; decreased exposure to chemicals, which reduces cancer diagnoses, endocrine disruption and neurological defects; and a reduction of emissions that cause climate change, which results in decreased stress, particularly for vulnerable populations. Departments across our organization have been resourceful in initiating and co-developing projects that stand as models of sustainability. Staff at all levels have made informed decisions to expand active and clean transportation, improve energy and water-use efficiency, build greater health system climate resilience, support and strengthen opportunities for

staff engagement, and develop new strategies to further reduce waste.

We know that low-carbon, climate-resilient and environmentally sustainable health care is integral to the health of our communities and our planet, and to us as individuals. PHSA is committed to supporting our teams and employees to think differently and creatively so that we can create a health-care system that not only benefits our patients and clients, but also our environment.

This 2021 EPAR is evidence of our united efforts to address our climate reality. I invite you to read this year's report and learn more about how, by putting our planet first, we can achieve better health and well-being for our patients, teams and communities.



**David Byres, RN, DNP, FCAN, ICD.D. CHE**  
President and Chief Executive Officer Provincial  
Health Services Authority



NAVIGATION

---

**Table of Contents**

**Executive Message**

▶ **Executive Summary**

Executive summary

The 2021 Dashboard

Energy and Carbon

Leadership and Innovation

Materials

Transportation

Water

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

---

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

# 1.0 Executive Summary

Environmental sustainability  
is everyone's story.



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

▶ Executive summary

The 2021 Dashboard

Energy and Carbon

Leadership and Innovation

Materials

Transportation

Water

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

# 1.1 Executive summary

The 10th annual Environmental Performance Accountability Report (EPAR) acknowledges the hard work, commitment, progress and success of everyone at PHSA in their continuing efforts to achieve environmental sustainability in all facets of our health system.

2021 was a year of many firsts and changes, along with continued work and new challenges. Over the course of the year, PHSA reached sustainability milestones and achievements that we are proud to share, as exemplified by the many staff who have shown initiative and commitment to meaningful change.

We also recognize that we are not trending to meet all of the 2025 targets necessary to achieving a truly sustainable health system. In some areas, pandemic and extreme weather events have presented challenges that have taken us in the wrong direction, or we haven't seen significant improvement towards targets because the work needed is complex and in some cases requires multiple department engagement and systemic change. Although older facilities and increasing demand for facility space present a challenge, they are also an opportunity to rethink health-care design, construction and operations. To ensure that we get back on track, we know that there must be continued progress in decision-making and the action that we take.

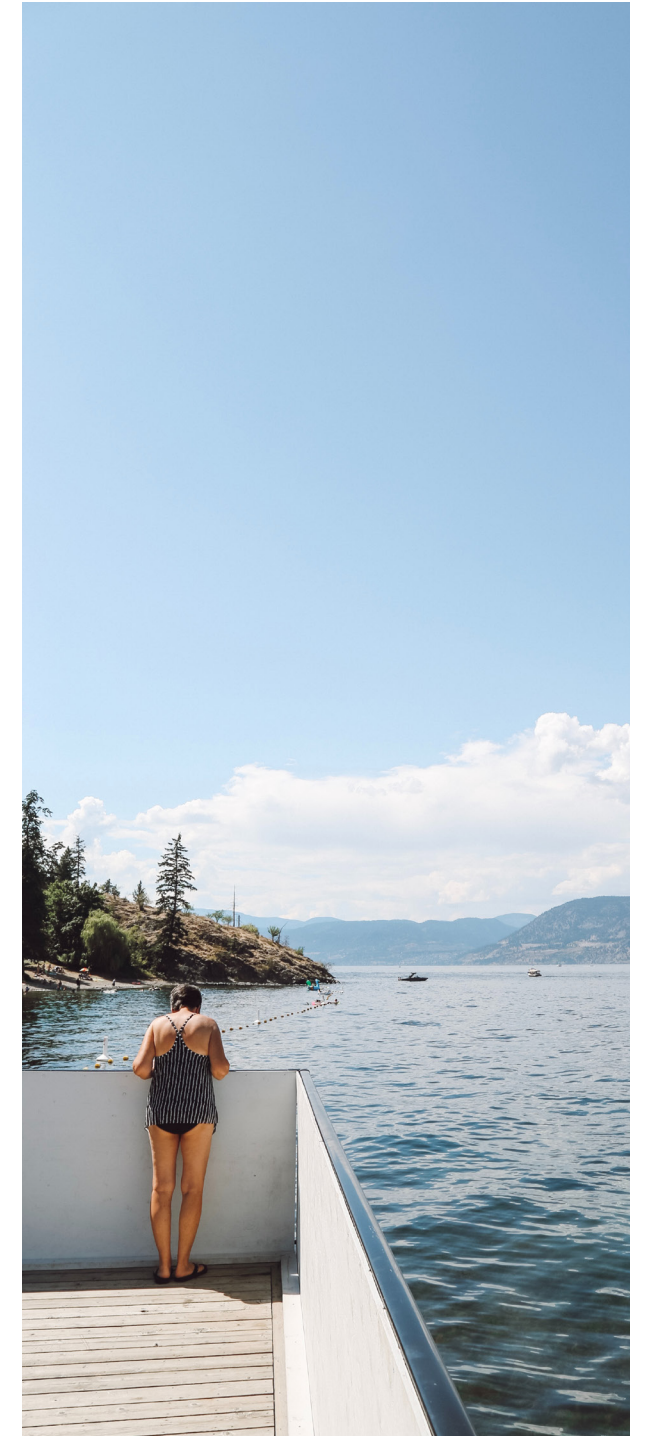
No individual, department or group can do it alone.

As this report shows, there is both a need and opportunity for everyone across PHSA to continue to collaborate more closely in clear, consistent and invested efforts for change. Together we must:

- ▶ Inform and motivate each other to take action to nurture and protect our planet.
- ▶ Share, learn about and co-develop action plans for sustainability.
- ▶ Innovate, and scale up and out the approaches that are working.
- ▶ Transform our processes and health system away from business as usual.
- ▶ Reinforce and celebrate the change we want to see.

Addressing climate change and restoring health to our health system, environment and planet is something we need to work on every day. From departmental meetings, to short- and long-term planning, and to decision-making and budgeting, environmental sustainability must be a priority in all aspects of our workplace and in our daily lives.

We are confident that we can face the challenges head on and do the work necessary to delivering low-carbon, resilient and environmentally sustainable care for the health of people, place and planet.





## NAVIGATION

### Table of Contents

#### Executive Message

#### Executive Summary

- ▶ Executive summary
  - The 2021 Dashboard
    - Energy and Carbon
    - Leadership and Innovation
    - Materials
    - Transportation
    - Water

#### Our Sustainability Story

#### We're Finding Solutions: Together.

#### Writing the Story We Want, Now and in the Future

#### References

## DOWNLOADS

#### PHSA Climate Change Accountability Report

#### Vancouver Coastal Health EPAR

#### Providence Health Care EPAR

#### Fraser Health EPAR

Here's a summary of our 2021 milestones and achievements, and what to watch for in 2022 and beyond:

### First ever!

- ▶ Circular Health Care Framework created to support departments at PHSA to develop strategies to avoid and reduce waste

### Refreshed and updated

- ▶ Energy and Environmental Sustainability (EES) team's Strategic Framework updated to reflect the importance of collaboration for low-carbon, resilient and environmentally sustainable health care
- ▶ GreenCare website launched, resulting in an average of 1,300 users a month and an increase in Green+Leader registrations by 75% (from 3/month to 5.25/month)

### Infrastructure projects

- ▶ Implementation of seven energy and carbon emissions projects that, when completed and fully commissioned, are expected to reduce our carbon emissions by more than 1,500 tCO<sub>2</sub>e per year
- ▶ As a result of strong interest of the BC Cancer community in climate action, energy efficiency and carbon-reduction projects were initiated and progressed in 2021 across BC Cancer, resulting in:
  - More than \$360,000 energy and carbon offset costs avoided per year
  - Natural gas savings of more than 25,000 GJ
  - More than 900,000 kWh electricity saved
  - An estimated 1,300 tonnes of greenhouse gas (GHG) emissions reduced once projects are completed and fully commissioned

### Environmentally preferable decision-making

- ▶ Business Initiatives Support Services hosted a Planetary Health-focused staff forum in order to identify what it looks like to create health and social value in the community and reduce the negative impact of the operations that it manages.
- ▶ Environmental questions were used in annual prequalification for Facilities Management contractor services and in the disposable surgical packs, drapes and gowns requests for proposals (RFPs).
- ▶ Staff sustainable commuting has increased by 10% since 2020.

### Research and publications

- ▶ Two climate adaptation-related research projects were completed and published in peer-reviewed scientific journals in 2021. [One](#) was focused on examining the impacts of wildfire smoke on indoor air quality at health-care facilities. [The other](#) was focused on identifying climate change impacts on occupants in long-term care facilities.

### Awarded

- ▶ Nine grants were sponsored by the GreenCare sustainability stream of the Health Promotion Initiatives Fund (HPIF), and approximately \$7,500 was distributed to recipients of the grant.

### 2022 highlights

- ▶ Cross-health-authority and departmental participation in the [2021-2023 Nourish Anchor Cohort Collaborative](#) to tackle interconnected challenges related to a lack of low-environmental-impact, healthy and culturally appropriate food choices in health-care facilities
- ▶ PHSA Supply Chain (the procurement group for all B.C. health authorities) initiation of a working group on sustainable procurement

- ▶ Sharing the [Low Carbon Resilience & Environmental Sustainability Guidelines for New Construction \(LCRES Guidelines\)](#) with Capital Project teams and other infrastructure project partners
- ▶ Modifying our environmental sustainability policy to align with updates to legislation, mandates and other guidance from government
- ▶ Sharing the [Climate Change and Health Adaptation Framework](#), developed as part of the HealthADAPT project, including current actions and new priorities up to 2026

“  
**Given our climate reality, changing how we approach environmental sustainability at an organizational level is one of the most fundamental challenges of our time. But people are taking action, and it's so encouraging and rewarding to work alongside them across teams and departments, in such a spirit of collaboration.**

- Mauricio Acosta, Executive Director, Facilities Management and Business Performance



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

Executive summary

▶ **The 2021 Dashboard**

Energy and Carbon

Leadership and Innovation

Materials

Transportation

Water

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**



# 1.2 The 2021 Dashboard: Setting sustainability targets and measuring results

2021 was a year of reflecting on progress and shifting gears to determine action moving forward. The Energy and Environmental Sustainability (EES) team refreshed its purpose and approach; identified 2025 key performance indicators (KPIs); and, in some Focus Areas (Climate Change, Leadership and Innovation, and Transportation), identified new targets to help us on our journey. Captured in the 2021 Dashboard are some, but not all, of the targets and KPIs that reflect progress in each of the Focus Areas. There are no targets and KPIs related to the Climate Change and Food Focus Areas in this year's dashboard as these are still relatively new for PHSA. They are, however, covered in section 3.0: We're Finding Solutions: Together.

Targets and KPIs help us all to determine challenges, recognize achievements and guide the actions we need to take to transform our health-care system toward environmentally sustainable and climate-resilient care for healthy people, place and planet. Strengthening our partnership approach to how we take action and measure progress will be vital to increasing our impact as we move towards our 2025 and 2030 targets. For information on the methodology behind the KPIs below, look [here](#).



NAVIGATION

Table of Contents

Executive Message

▶ Executive Summary

Executive summary

The 2021 Dashboard

Energy and Carbon

Leadership and Innovation

Materials

Transportation

Water

Our Sustainability Story

We're Finding Solutions:  
 Together.

Writing the Story We Want,  
 Now and in the Future

References

DOWNLOADS

PHSA Climate Change  
 Accountability Report

Vancouver Coastal Health EPAR

Providence Health Care EPAR

Fraser Health EPAR



## Energy and Carbon

Goal: Reduce our carbon footprint by increasing energy efficiency and reducing reliance on fossil fuels.

2025 Target (baseline 2007)		2021 Results*	Traffic Light	2030 Target
Reduce energy-use intensity (ekWh/m <sup>2</sup> /year) by	25%	24.9%	●	30%
Reduce absolute in-scope GHG emissions (tCO <sub>2</sub> e/year) by	30%	18.6%	●	50%
Reduce in-scope GHG-emissions intensity (tCO <sub>2</sub> e/year/m <sup>2</sup> ) by	40%	32.6%	●	50%

- 2025 target on track
- 2025 target behind schedule
- 2025 target requires attention

\* Results include the Red Fish Healing Centre for Mental Health and Addiction, which opened in October 2021. Inclusion of the data means the absolute energy use is higher, but it lowers the energy-use intensity since it does not include a whole year of data.



NAVIGATION

Table of Contents

Executive Message

▶ Executive Summary

Executive summary

The 2021 Dashboard

Energy and Carbon

Leadership and Innovation

Materials

Transportation

Water

Our Sustainability Story

We're Finding Solutions:  
 Together.

Writing the Story We Want,  
 Now and in the Future

References

DOWNLOADS

PHSA Climate Change  
 Accountability Report

Vancouver Coastal Health EPAR

Providence Health Care EPAR

Fraser Health EPAR



## Leadership and Innovation

Goal: Collaboratively foster a culture of transformative leadership and innovation for environmental sustainability in health care.

2025 Target	2021 Results	Traffic Light	2030 Target
Increase total number of <b>Green+Leaders</b> (registrations) to <b>450</b>	260	●	<b>681</b>

- 2025 target on track
- 2025 target behind schedule
- 2025 target requires attention



NAVIGATION

Table of Contents

Executive Message

▶ Executive Summary

Executive summary

The 2021 Dashboard

Energy and Carbon

Leadership and Innovation

Materials

Transportation

Water

Our Sustainability Story

We're Finding Solutions:  
 Together.

Writing the Story We Want,  
 Now and in the Future

References

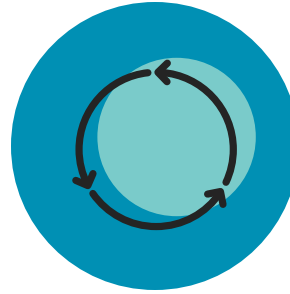
DOWNLOADS

PHSA Climate Change  
 Accountability Report

Vancouver Coastal Health EPAR

Providence Health Care EPAR

Fraser Health EPAR



# Materials

Goal: Choose materials and products that contribute to human and environmental health, while avoiding waste and unnecessary chemicals.

2025 Target	2021 Results* †	Traffic Light	2030 Target
<b>Increase waste-diversion rates (% of waste diverted, annual average) to</b>			
<b>35%</b>	25.0%	●	<b>50%</b>
<b>Decrease waste-intensity rates (kg/m<sup>2</sup>/year) to</b>			
<b>4.0</b>	4.5	●	<b>3.5</b>

- 2025 target on track
- 2025 target behind schedule
- 2025 target requires attention

\* Our waste diversion reflects only waste segregation, as our recycling provider paused the collection of recycling for most of 2021 due to concerns for staff safety during the COVID-19 pandemic. All recycling and general garbage streams were instead taken to a local waste-to-energy facility. Recycling was restarted in smaller facilities in November 2021.

† Results include the Red Fish Healing Centre for Mental Health and Addiction, which opened in October 2021. Inclusion of the data means the waste volume is higher, but it lowers the waste intensity since it does not include a whole year of data.



NAVIGATION

Table of Contents

Executive Message

▶ Executive Summary

Executive summary

The 2021 Dashboard

Energy and Carbon

Leadership and Innovation

Materials

Transportation

Water

Our Sustainability Story

We're Finding Solutions:  
 Together.

Writing the Story We Want,  
 Now and in the Future

References

DOWNLOADS

PHSA Climate Change  
 Accountability Report

Vancouver Coastal Health EPAR

Providence Health Care EPAR

Fraser Health EPAR



# Transportation

Goal: Increase access to and use of transportation modes that reduce negative environmental impacts and benefit human health and wellness.

2025 Target	2021 Results	Traffic Light	2030 Target
<b>Increase proportion of staff commuting by sustainable transportation modes to</b>	52.1%		<b>75%</b>

- 2025 target on track
- 2025 target behind schedule
- 2025 target requires attention



NAVIGATION

Table of Contents

Executive Message

▶ Executive Summary

Executive summary

The 2021 Dashboard

Energy and Carbon

Leadership and Innovation

Materials

Transportation

Water

Our Sustainability Story

We're Finding Solutions:  
 Together.

Writing the Story We Want,  
 Now and in the Future

References

DOWNLOADS

PHSA Climate Change  
 Accountability Report

Vancouver Coastal Health EPAR




Providence Health Care EPAR




Fraser Health EPAR



# Water

Goal: Minimize water consumption to reduce demand on natural resources and impact on our living environments.

2025 Target (baseline 2010)		2021 Results*	Traffic Light	2030 Target
Reduce building water (use) performance intensity (m <sup>3</sup> /m <sup>2</sup> /year) by		26.4%		

-  2025 target on track
-  2025 target behind schedule
-  2025 target requires attention

\* Results include the Red Fish Healing Centre for Mental Health and Addiction, which opened in October 2021. Inclusion of the data means the absolute water use is higher, but it lowers the water intensity since it does not include a whole year of data.



NAVIGATION

[Table of Contents](#)

[Executive Message](#)

[Executive Summary](#)

► [Our Sustainability Story](#)

PHSA's commitment

The Energy and Environmental  
Sustainability team

Building and operating for  
energy and environmental  
sustainability

**We're Finding Solutions:  
Together.**

**Writing the Story We Want,  
Now and in the Future**

[References](#)

DOWNLOADS

[PHSA Climate Change  
Accountability Report](#)

[Vancouver Coastal Health EPAR](#)

[Providence Health Care EPAR](#)

[Fraser Health EPAR](#)

# 2.0 Our Sustainability Story





NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

- ▶ PHSA's commitment  
The Energy and Environmental Sustainability team  
Building and operating for energy and environmental sustainability

**We're Finding Solutions: Together.**

**Writing the Story We Want, Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

# 2.1 PHSA's commitment to sustainability

## PHSA's strategic framework

A Better Future Through Fighting Climate Change outlines provincial targets and strategies, PHSA's response to date, and the opportunities for further action across the organization for 2022 and beyond. While still under development, this framework highlights how meaningful impact is connected to actions in departments and teams across PHSA that are working towards carbon emission reductions.

## Policy

Achieving energy and environmental sustainability is a priority for PHSA. Our [environmental sustainability policy](#) highlights the importance of developing a triple-bottom-line approach to sustainability, which balances ecological, societal and economic imperatives, and recognizes the link between a healthy environment and a healthy population. As such, we recognize our duty to minimize our environmental impact through leadership and strategic partnerships, facility construction and operations. Further, we recognize the need to modify this policy to align with updates to legislation, mandates and other guidance from government, an activity that will be initiated in 2022.

## Approach

Agencies and departments across PHSA are defining their own commitments and looking for ways to contribute. Long-standing green teams and a newly formed Planetary Health Care Unit are coming together on World Health Day and beyond to increase staff engagement, scale up efforts and make sustainability business as usual. Of staff, 92% agree<sup>A</sup> that health-care organizations should demonstrate leadership when it comes to environmental health and wellness in the workplace and our community, and 94% agree<sup>A</sup> that health-care organizations should work to support healthy policies that support action on climate change and biodiversity loss.<sup>B</sup>

“

**We know that low-carbon, climate-resilient and environmentally sustainable health care is integral to the health of our communities and our planet, and to us as individuals. PHSA is committed to supporting our teams and employees to think differently and creatively so that we can create a health-care system that not only benefits our patients and clients, but also our environment.**

– David Byres, President and Chief Executive Officer

Learn about who PHSA is and what they do, [here](#).

PHSA provides specialized health-care services to communities across British Columbia, on the territories of many distinct First Nations. We are grateful to all the First Nations who have cared for and nurtured the lands and waters around us for all time, including the xʷməθkʷəy̓əm (Musqueam), Sḵwxwú7mesh Úxwumixw (Squamish Nation), and səliłwətaʔ (Tsleil-Waututh Nation) on whose unceded and ancestral territory our head office is located.

We acknowledge that there is much to be learned about environmental stewardship from these nations and communities.



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

- ▶ PHSA's commitment  
 The Energy and Environmental Sustainability team  
 Building and operating for energy and environmental sustainability

**We're Finding Solutions: Together.**

**Writing the Story We Want, Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

**Regulatory guidance**

The *Climate Change Accountability Act* (CCAA) and the *CleanBC* plan have set ambitious targets for public sector organizations, requiring a reduction in emissions by 40% by 2030, 60% by 2040, and 80% by 2050. The CleanBC plan is the pathway to achieve these targets and (over the 2007 baseline) has set even more aggressive targets of:

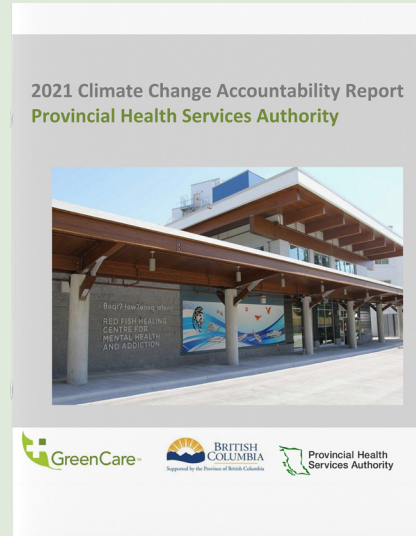
**50%**

reduction in emissions for public sector buildings by 2030

**40%**

reduction in fleet vehicle emissions by 2030

Of the total measured in-scope emissions generated by PHSA sites, over 95% are from buildings, while the remaining 5% are from supplies (paper usage) and transportation (fleet vehicles) combined. To achieve carbon neutrality, PHSA minimized greenhouse gas (GHG) emissions, reported the remaining GHG emissions, and then purchased carbon offsets. In addition, the CCAA also requires public sector organizations to “manage the risks to the public sector organization that could reasonably be expected to result from a changing climate.”



**The PHSA Climate Change Accountability Report**

Each year, along with all public sector organizations, B.C.'s health organizations submit a Climate Change Accountability Report (CCAR) (formerly Carbon Neutral Action Report (CNAR) to the Climate Action Secretariat of the provincial government. This is a mandated reporting of GHG emissions and other data, and current and planned actions to reduce GHG emissions.

In 2021, and including prior year adjustment, PHSA had a carbon footprint offset of 19,526 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e), which was offset at a total cost of \$512,557.50. This represents an 18.5% decrease in emissions per floor area relative to the carbon footprint base reporting year, 2007.

[Download the PHSA Climate Change Accountability Report](#)



BC Cancer Agency in Victoria.

NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

PHSA's commitment

► The Energy and Environmental Sustainability team

Building and operating for energy and environmental sustainability

**We're Finding Solutions: Together.**

**Writing the Story We Want, Now and in the Future**

References

DOWNLOADS

**PHSA Climate Change Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

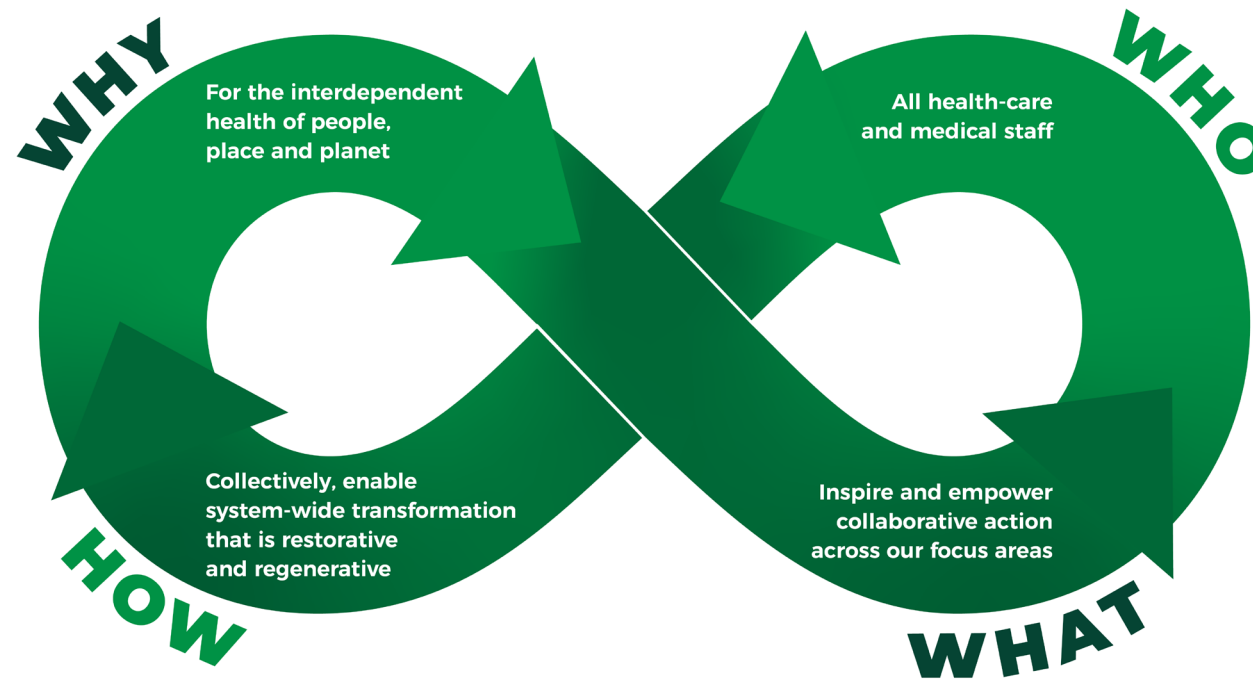
**Fraser Health EPAR**

## 2.2 The Energy and Environmental Sustainability team

The Energy and Environmental Sustainability (EES) team is driving the push for low-carbon, climate-resilient and environmentally sustainable health care, but realize it can't be done alone.

In 2021, the EES team updated its strategic framework. Because environmental sustainability work is a journey that doesn't end, but continually refines the why, the what, the who and the how, in order to have increasing and meaningful impact, the framework is presented as an infinity symbol. This symbol also reminds us of the interrelationships of all aspects of environmental sustainability.

The EES Strategic Framework



THE EES TEAM'S PURPOSE:

To inspire and empower everyone we work with to collaboratively enable systemic transformation so that we can restore and regenerate the interdependent health of people and planet — now and for future generations.

“ I am very passionate about our environment and the need to reduce our emissions and adapt to climate change — and the interrelationship between the GreenCare Focus Areas and meaningful impact is so essential to this. Leading and being part of a collaborative dynamic team that wants to inspire change is the most rewarding aspect of my work.

– Robert Bradley, Director, Energy and Environmental Sustainability



NAVIGATION

Table of Contents

Executive Message

Executive Summary

Our Sustainability Story

- PHSA's commitment
- The Energy and Environmental Sustainability team
- ▶ Building and operating for energy and environmental sustainability

We're Finding Solutions: Together.

Writing the Story We Want, Now and in the Future

References

DOWNLOADS

PHSA Climate Change  
Accountability Report

Vancouver Coastal Health EPAR

Providence Health Care EPAR

Fraser Health EPAR

## 2.3 Building and operating for energy and environmental sustainability

In the design and construction of new facilities, and in the operation of existing ones, PHSA is supporting the highest level of human and environmental health and well-being by:

- ▶ Evaluating and reducing the impacts of climate change on a facility and the surrounding community
- ▶ Assessing how the design, construction and operation strategies of a facility will impact the environment and human health
- ▶ Implementing low-carbon, climate risk and resilience, and environmental sustainability strategies
- ▶ Collaborating with project compliance teams to ensure energy and carbon performance targets are embedded into design and construction agreements
- ▶ Achieving LEED certification (a globally recognized green-building rating system administered by the [Canadian Green Building Council](#))
- ▶ Meeting and exceeding environmental and climate change regulations and targets
- ▶ Drawing on credible evidence that links health outcomes to planning and design of the built-environment (e.g. [The Healthy Built Environment Linkages Toolkit](#))

### Our buildings<sup>c</sup>

# 467,587m<sup>2</sup>

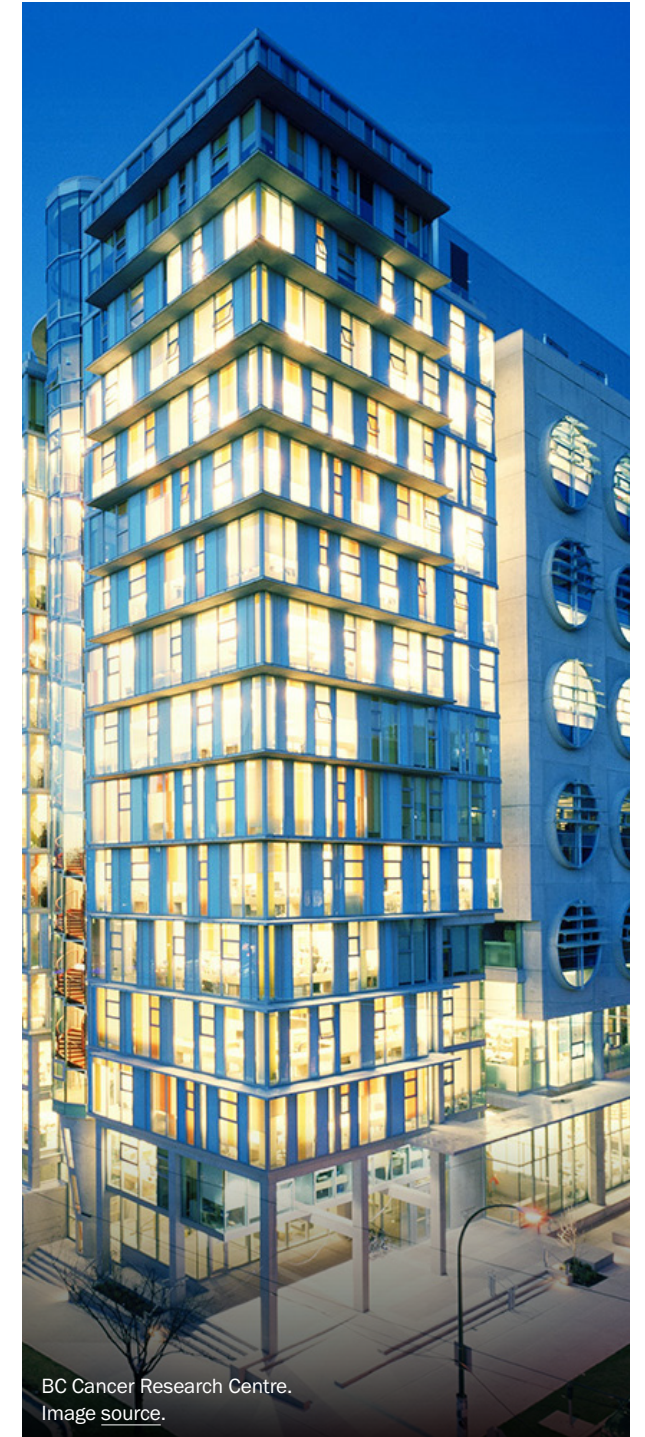
usable facility space

# 78

distinct buildings

“  
**We are efficient and effective in our delivery of exceptional service, and contribute to a positive patient experience. If we have climate resilient, low-carbon and environmentally sustainable health-care facilities, we are contributing to that positive patient experience in so many ways, and having a permanent effect on our health-care delivery for years to come.**

– Rian Dodds, Director, Facilities Maintenance and Operations



BC Cancer Research Centre.  
Image source.

NAVIGATION

[Table of Contents](#)

[Executive Message](#)

[Executive Summary](#)

► [Our Sustainability Story](#)

PHSA's commitment  
 The Energy and Environmental  
 Sustainability team  
 Building and operating for  
 energy and environmental  
 sustainability

**We're Finding Solutions:  
 Together.**

**Writing the Story We Want,  
 Now and in the Future**

**References**

DOWNLOADS

[PHSA Climate Change  
 Accountability Report](#)

[Vancouver Coastal Health EPAR](#)

[Providence Health Care EPAR](#)

[Fraser Health EPAR](#)

**Our LEED projects**

LEED certification is a globally recognized symbol of sustainability achievement and leadership. LEED certified buildings save money, improve efficiency, lower carbon emissions and create healthier places for people. They are a critical part of addressing climate change and meeting environmental, social and corporate governance (ESG) goals; enhancing resilience; and supporting more equitable communities.

**TOTAL**

**6**  
 buildings

**93,096m<sup>2</sup>**  
 of building space

**GOLD CERTIFICATION**

**5**  
 buildings

**86,816m<sup>2</sup>**  
 of building space

- ▶ BC Children's and BC Women's Redevelopment Project – Teck Acute Care Centre
- ▶ BC Children's and BC Women's Health Centre – Child Care Centre
- ▶ BC Cancer Agency Centre for the North
- ▶ BC Children's & BC Women's Redevelopment Project Clinical Support Building
- ▶ BC Cancer Research Centre

**SILVER CERTIFICATION**

**1**  
 building

**6,280m<sup>2</sup>**  
 of building space

- ▶ Child, Adolescent and Women's Mental Health Building

**REGISTERED (set to be certified)**

**1**  
 building

**14,997m<sup>2</sup>**  
 of building space

- ▶ Red Fish Healing Centre for Mental Health and Addiction



NAVIGATION

[Table of Contents](#)

[Executive Message](#)

[Executive Summary](#)

[Our Sustainability Story](#)

▶ [We're Finding Solutions:  
Together.](#)

[Our Focus Areas](#)

[Climate Change](#)

[Energy and Carbon](#)

[Food](#)

[Leadership and Innovation](#)

[Materials](#)

[Transportation](#)

[Water](#)

[Writing the Story We Want,  
Now and in the Future](#)

[References](#)

DOWNLOADS

[PHSA Climate Change  
Accountability Report](#)

[Vancouver Coastal Health EPAR](#)

[Providence Health Care EPAR](#)

[Fraser Health EPAR](#)



# 3.0 We're Finding Solutions: Together.



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
 Together.**

► **Our Focus Areas**

- Climate Change
- Energy and Carbon
- Food
- Leadership and Innovation
- Materials
- Transportation
- Water

**Writing the Story We Want,  
 Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
 Accountability Report**

**Vancouver Coastal Health EPAR**

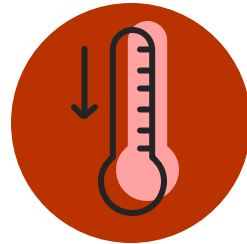
**Providence Health Care EPAR**

**Fraser Health EPAR**

# 3.1 Our Focus Areas

Efforts to transform the system for environmentally sustainable and climate-resilient health care have been categorized into seven Focus Areas. The results in each Focus Area are not limited to work undertaken by the Energy and Environmental Sustainability (EES) team. Results are also a culmination of health-care and medical staff efforts to create environmentally friendly workplaces, along with work undertaken in collaboration and partnership with departments across PHSA and B.C. As the title of this section suggests, progress in these Focus Areas is really about finding solutions together.

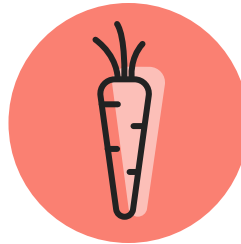
By pursuing meaningful change collaboratively across the health system, PHSA can assess its progress and plan for future efforts. Each of the following Focus Areas highlights the associated 2025 and 2030 goals and targets. Each section then outlines 2021 actions and achievements to move towards these targets, as well as stories to highlight each Focus Area. These Focus Areas include:



**Climate Change**



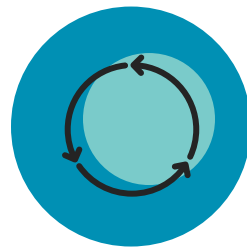
**Energy and Carbon**



**Food**



**Leadership and  
 Innovation**



**Materials**



**Transportation**



**Water**

In some cases, a target is influenced by but not necessarily aligned with provincial or regional mandates and targets. In others, it is based on aspirational progress that is required based on the urgency of the health system's need to fight climate change.

Want to read stories or find information and resources related to these Focus Areas? Visit [here](#).

Just like the connections between human and environmental health, these Focus Areas are interrelated in that efforts and progress made in one will impact others.



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

Our Focus Areas

▶ Climate Change

Energy and Carbon

Food

Leadership and Innovation

Materials

Transportation

Water

**Writing the Story We Want,  
Now and in the Future**

**References**

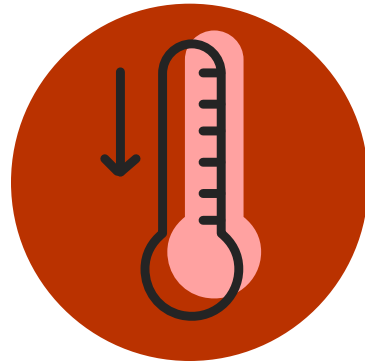
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Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**



# 1. Climate Change

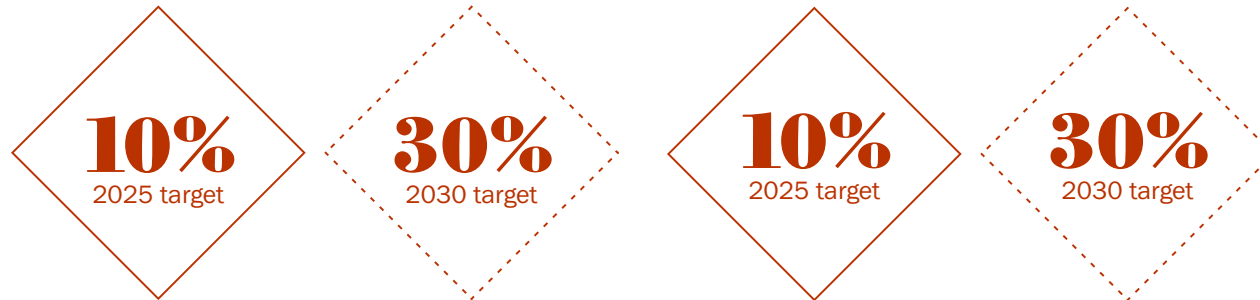
Our goal: Move toward a climate-resilient health system and reduce greenhouse gas (GHG) emissions in facility design and operations.

LEARN MORE

## Our 2025/2030 targets (newly created)

**Increase the proportion of existing facilities where climate risk and resilience impacts and opportunities are understood.**

**Increase proportion of relevant infrastructure retrofit projects where climate risk and resilience are considered.**



NAVIGATION

[Table of Contents](#)

[Executive Message](#)

[Executive Summary](#)

[Our Sustainability Story](#)

[We're Finding Solutions: Together.](#)

Our Focus Areas

- ▶ Climate Change
- Energy and Carbon
- Food
- Leadership and Innovation
- Materials
- Transportation
- Water

[Writing the Story We Want, Now and in the Future](#)

[References](#)

DOWNLOADS

[PHSA Climate Change Accountability Report](#)

[Vancouver Coastal Health EPAR](#)

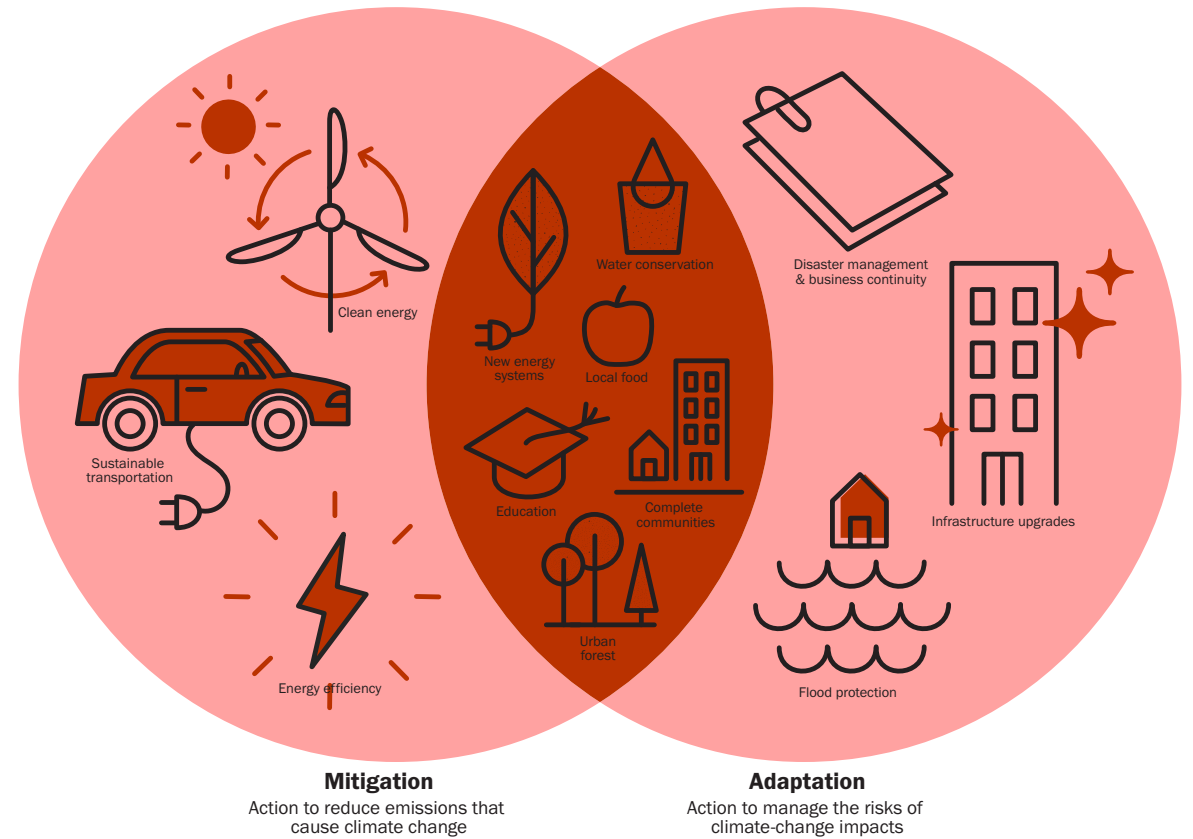
[Providence Health Care EPAR](#)

[Fraser Health EPAR](#)

**2021 actions**

- ▶ Brought together a range of project stakeholders representing project planning, facilities, clinical service delivery and occupant care, among others, to incorporate climate mitigation and resilience strategies into capital project design and construction, in line with the [Climate Resilience Guidelines for BC Health Facility Planning & Design](#)
- ▶ Strengthened cross-sectoral relationships and worked with utility partners (i.e. BC Hydro, FortisBC) in relation to integrated planning for existing and new facilities
- ▶ Worked across EES Focus Areas to strengthen collective understanding of low-carbon resilience
- ▶ Installed sensors to monitor internal and external air quality at three facilities
- ▶ Assessed risks at the site level for owned and contracted facilities across PHSA

**Building climate resilience**



**HealthADAPT update**

The EES team partnered with the Population and Public Health teams for Fraser Health and Vancouver Coastal Health, and Health Emergency Management BC, on the federally funded HealthADAPT project from 2019 to 2022. HealthADAPT began with a climate change and health vulnerability and capacity assessment, which explored the degree to which communities, populations, health facilities and services are susceptible to and prepared for the effects of climate change. Based on the results and extensive engagement, the four partner organizations drafted a [Climate Change and Health Adaptation Framework](#) that outlines current actions and new priorities (finalized in 2022).



## NAVIGATION

### Table of Contents

### Executive Message

### Executive Summary

### Our Sustainability Story

### We're Finding Solutions: Together.

#### Our Focus Areas

- ▶ Climate Change
- Energy and Carbon
- Food
- Leadership and Innovation
- Materials
- Transportation
- Water

### Writing the Story We Want, Now and in the Future

### References

## DOWNLOADS

### PHSA Climate Change Accountability Report

### Vancouver Coastal Health EPAR

### Providence Health Care EPAR

### Fraser Health EPAR

## Our partners

BC Housing

BC Ministry of Environment and Climate  
Change Strategy

BC Ministry of Health

Canadian Coalition for Green Health Care

Environment and Climate Change Canada

First Nations Health Authority

Health Canada

Health Emergency Management BC

Interior Health

Island Health

Local governments

National Research Council Canada

Northern Health

Pacific Climate Impacts Consortium

Population and Public Health

Simon Fraser University

University of British Columbia

## Our achievements

- ▶ Drafted an update to the [Low Carbon Resilience & Environmental Sustainability Guidelines for New Construction \(LCRES Guidelines\)](#), including a standard scope of work language for procurement (finalized in 2022)
- ▶ Completed one climate hazard exposure screen and one climate risk assessment for the BC Children's Slocan Redevelopment project
- ▶ Completed a physical risk report for numerous PHSA facilities to understand potential risk costs under changing climate conditions
- ▶ Completed and published two climate adaptation-related research projects in peer-reviewed scientific journals in 2021. [One](#) was focused on examining the impacts of wildfire smoke on indoor air quality at health-care facilities. [The other](#) was focused on identifying climate change impacts on occupants in long-term care facilities.

## OUR STORY

### Where there's fire, there's smoke

In B.C., smoky summers are becoming the norm. For more vulnerable populations, including pregnant people, young children, the elderly and those with chronic conditions, smoke is not just an inconvenience, it can be a deadly hazard.

Since populations most vulnerable to smoke events are highly represented in health facilities, the EES team collaborated with researchers from PHSA, Vancouver Coastal Health, the BCCDC, UBC and Health Canada to understand how smoke affects those receiving treatment.

To gather data, researchers installed one outdoor and seven indoor sensors to assess fine particulate matter infiltration at a large inpatient rehabilitation facility in Vancouver. Though the research is ongoing, data collected in 2020 showed up to 41% more particulate matter when wildfire smoke is in the air.

The results of this study underscore the need to carefully consider indoor air quality during wildfire season. The research includes recommendations that can reduce staff and patients' exposure to smoke, including deploying portable air cleaners and implementing larger-scale upgrades to filtration systems.

While it is unnerving to consider wildfire smoke events as a normal part of B.C. summers, the information gathered from this study can help patients and facility staff to breathe a little easier.

**Read more ▶**

NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

Our Focus Areas

- ▶ Climate Change
- Energy and Carbon
- Food
- Leadership and Innovation
- Materials
- Transportation
- Water

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**



**What do PHSA staff have to say about the impact of climate change hazards on their work?<sup>B</sup>**

**74%**

of PHSA staff said their job duties were impacted by extreme weather events in 2021. The most disruptive events were wildfires, wildfire smoke, wind storms, drought/water shortage and heat waves.

The most common impacts on job duties were:

- ▶ Workspace (at home) was physically impacted.
- ▶ Workspace (not at home) was physically impacted.
- ▶ Supply chain disruptions occurred.
- ▶ Had to miss work due to personal responsibilities/duties related to the impacts of extreme weather events.
- ▶ Couldn't physically get to place of work.

**“ Human health require[s] planetary health. Not addressing the climate crisis makes all of our other efforts futile in regards to having a health[y] society in the long run.**

– PHSA GreenCare Survey respondent



NAVIGATION

Table of Contents

Executive Message

Executive Summary

Our Sustainability Story

We're Finding Solutions:  
 Together.

Our Focus Areas

- Climate Change
- ▶ Energy and Carbon
- Food
- Leadership and Innovation
- Materials
- Transportation
- Water

Writing the Story We Want,  
 Now and in the Future

References

DOWNLOADS

PHSA Climate Change  
 Accountability Report

Vancouver Coastal Health EPAR

Providence Health Care EPAR

Fraser Health EPAR



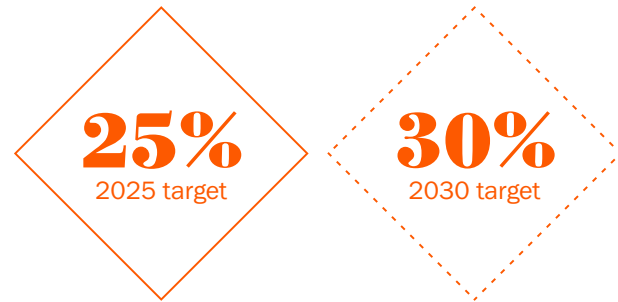
## 2. Energy and Carbon

Our goal: Reduce our carbon footprint by increasing energy efficiency and reducing reliance on fossil fuels.

LEARN MORE

### Our 2025/2030 targets

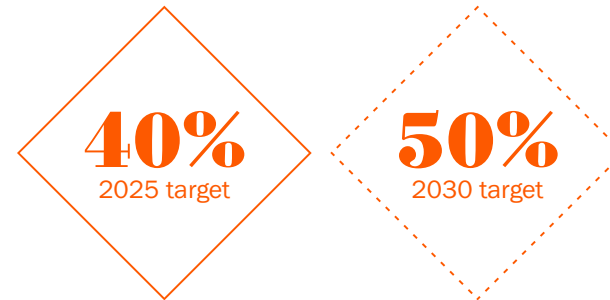
#### Reduce energy-use intensity by:



#### Reduce absolute in-scope GHG emissions by:



#### Reduce in-scope GHG-emissions intensity by:



### Snapshot in numbers

**\$290,000**

invested in energy efficiency initiatives from the Green Revolving Fund

**\$2.8 million**

invested in carbon reduction projects from Carbon Neutral Capital Program funding

**7**

energy and carbon emissions projects initiated

**1,500 tCO<sub>2</sub>e**

of projected carbon emissions reduced

**\$512,557**

carbon offsets paid to become carbon neutral

**\$1.3 million**

in utility incentives received from BC Hydro and FortisBC in fiscal year 2021/2022

## NAVIGATION

### Table of Contents

#### Executive Message

#### Executive Summary

#### Our Sustainability Story

#### We're Finding Solutions: Together.

##### Our Focus Areas

Climate Change

▶ Energy and Carbon

Food

Leadership and Innovation

Materials

Transportation

Water

#### Writing the Story We Want, Now and in the Future

#### References

## DOWNLOADS

#### PHSA Climate Change Accountability Report

#### Vancouver Coastal Health EPAR

#### Providence Health Care EPAR

#### Fraser Health EPAR

## 2021 actions

It is important to note that energy and carbon management initiatives work together through coordinated efforts.

- ▶ Implementation of energy efficiency and carbon-reduction measures (identified through participation in the [Continuous Optimization program](#)) progressed at the Shaughnessy Building and was completed at the BC Cancer Research Institute and BC Cancer – Victoria. An investigation phase under the same program was initiated at multiple buildings at the BC Children's Hospital and BC Women's Hospital + Health Centre.
- ▶ Waste-heat recovery projects were completed and progressing at BC Children's Hospital and BC Women's Hospital + Health Centre.
- ▶ At BC Cancer – Victoria, and BC Cancer – Surrey, energy efficiency and carbon-reduction projects were initiated, which will enhance and optimize the performance of these facilities once projects are completed and fully commissioned.
- ▶ Three lighting upgrades were initiated: at BC Cancer Research Centre, BC Cancer – Surrey, and the Shaughnessy Building at BC Children's Hospital and BC Women's Hospital + Health Centre.
- ▶ Multiple energy studies across BC Cancer and BC Children's Hospital and BC Women's Hospital + Health Centre were initiated to identify further opportunities for reducing energy use and carbon emissions in our buildings, while enhancing occupants' comfort and satisfaction with the indoor environmental quality.
- ▶ A Facilities Maintenance and Operations staff engagement was focused on reviewing energy use in buildings, identification of energy- and carbon-reduction opportunities, and optimization of existing equipment/plants where applicable and feasible.
- ▶ Low-carbon resilience and environmental sustainability concepts were used in the design and construction of the Red Fish Healing Centre for Mental Health and Addiction.
- ▶ There was active participation in the [Energy Wise Network](#) program, and campaigns were run for staff to participate in energy and emissions-focused initiatives.





NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
 Together.**

Our Focus Areas

Climate Change

▶ Energy and Carbon

Food

Leadership and Innovation

Materials

Transportation

Water

**Writing the Story We Want,  
 Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
 Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

**Our partners**

BC Hydro<sup>®</sup>

BC Emergency Health Services

Climate Action Secretariat

Facilities Maintenance and Operations (FMO)

Finance

FortisBC<sup>®</sup>

Ministry of Environment and Climate Change Strategy

Ministry of Health Capital Services Branch

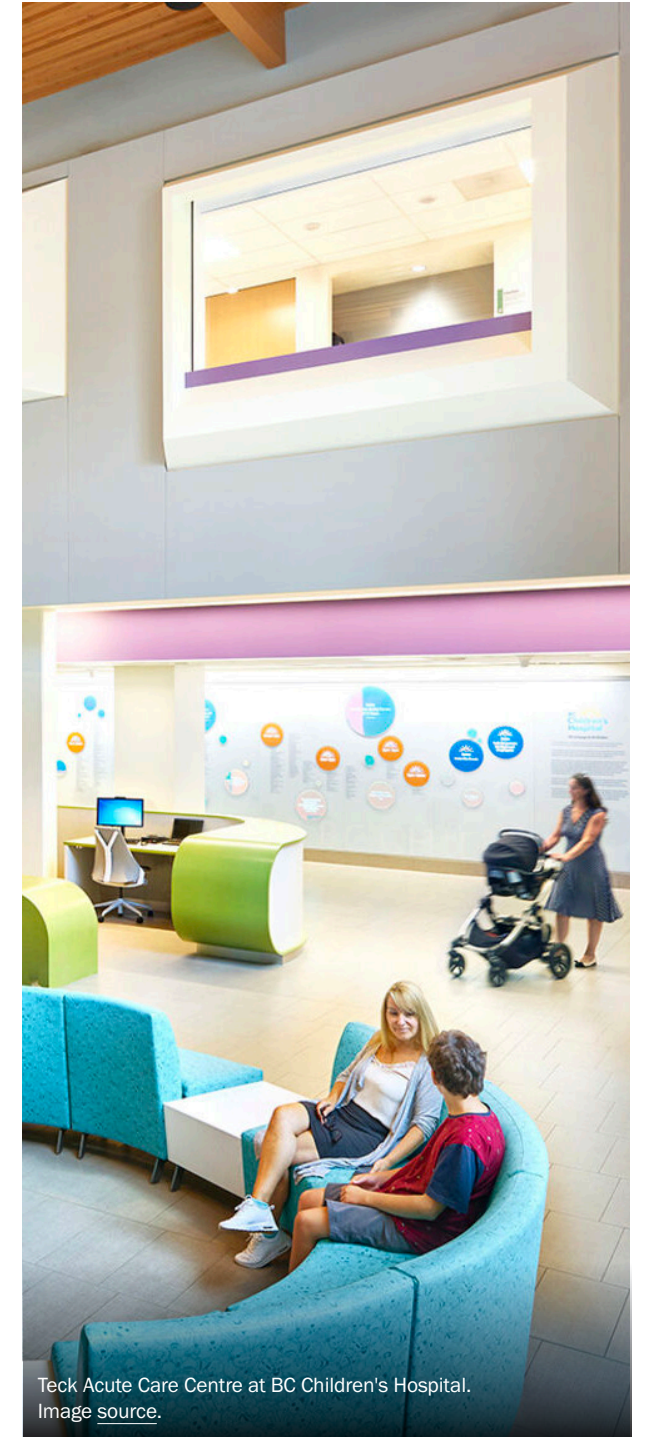
Municipal governments

Projects and Planning teams

PHSA Supply Chain

**Our achievements**

- ▶ Initiated and advanced seven energy and carbon emissions projects with projected annual savings of \$425,000 of energy and carbon offset costs, projected energy savings of 9.5 GWh and an expected reduction of more than 1,500 tCO<sub>2</sub>e per year
- ▶ Energy efficiency and carbon-reduction projects initiated and advanced in 2021 at BC Cancer have been timely, given the BC Cancer community's strong interest in climate action. As a result of projects across BC Cancer, expected savings include: \$360,000 of energy and carbon offset costs per year; natural gas savings of more than 25,000 GJ; savings of more than 900,000 kWh of electricity; and reduction of GHG emissions by an estimated 1,300 tonnes once projects are completed and fully commissioned. More importantly, these initiatives will bring a positive change to our clinicians, staff and patients.
- ▶ Kick-started an initiative with the BC Cancer Diagnostic Imaging Department to identify opportunities for reducing energy use associated with CT scanners
- ▶ Secured and used \$2.8 million in funding from the Carbon Neutral Capital Program to invest in energy and carbon emissions projects
- ▶ Received \$1.1 million of project incentives from utility partners to further support energy and emission reduction projects



Teck Acute Care Centre at BC Children's Hospital.  
 Image source.

NAVIGATION

[Table of Contents](#)

[Executive Message](#)

[Executive Summary](#)

[Our Sustainability Story](#)

[We're Finding Solutions: Together.](#)

Our Focus Areas

- [Climate Change](#)
- [Energy and Carbon](#)
- [Food](#)
- [Leadership and Innovation](#)
- [Materials](#)
- [Transportation](#)
- [Water](#)

[Writing the Story We Want, Now and in the Future](#)

[References](#)

DOWNLOADS

[PHSA Climate Change Accountability Report](#)

[Vancouver Coastal Health EPAR](#)

[Providence Health Care EPAR](#)

[Fraser Health EPAR](#)

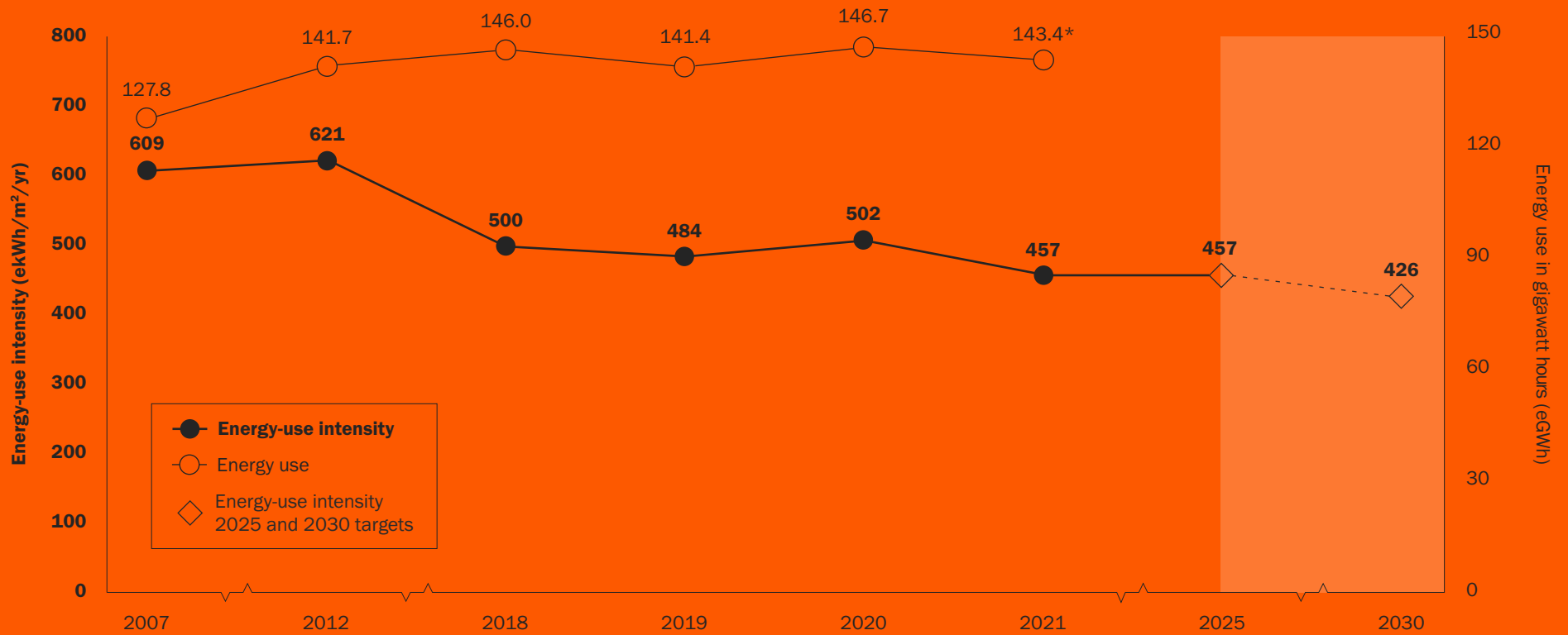
# Energy Use and Intensity

Want to learn more about the graphs and how the results are calculated?

[VISIT HERE](#)

**24.9%** ↓

Energy-use intensity has decreased by 24.9% since 2007, and, despite an increase of 49% in core facility space, our energy use only increased by 12%.



\* Results include the Red Fish Healing Centre for Mental Health and Addiction which opened in October 2021. Inclusion of the data means the absolute energy use

is higher, but it lowers the energy-use intensity since it does not include a whole year of data.



NAVIGATION

[Table of Contents](#)

[Executive Message](#)

[Executive Summary](#)

[Our Sustainability Story](#)

[We're Finding Solutions:  
Together.](#)

Our Focus Areas

- [Climate Change](#)
- [Energy and Carbon](#)
- [Food](#)
- [Leadership and Innovation](#)
- [Materials](#)
- [Transportation](#)
- [Water](#)

[Writing the Story We Want,  
Now and in the Future](#)

[References](#)

DOWNLOADS

[PHSA Climate Change  
Accountability Report](#)

[Vancouver Coastal Health EPAR](#)

[Providence Health Care EPAR](#)

[Fraser Health EPAR](#)

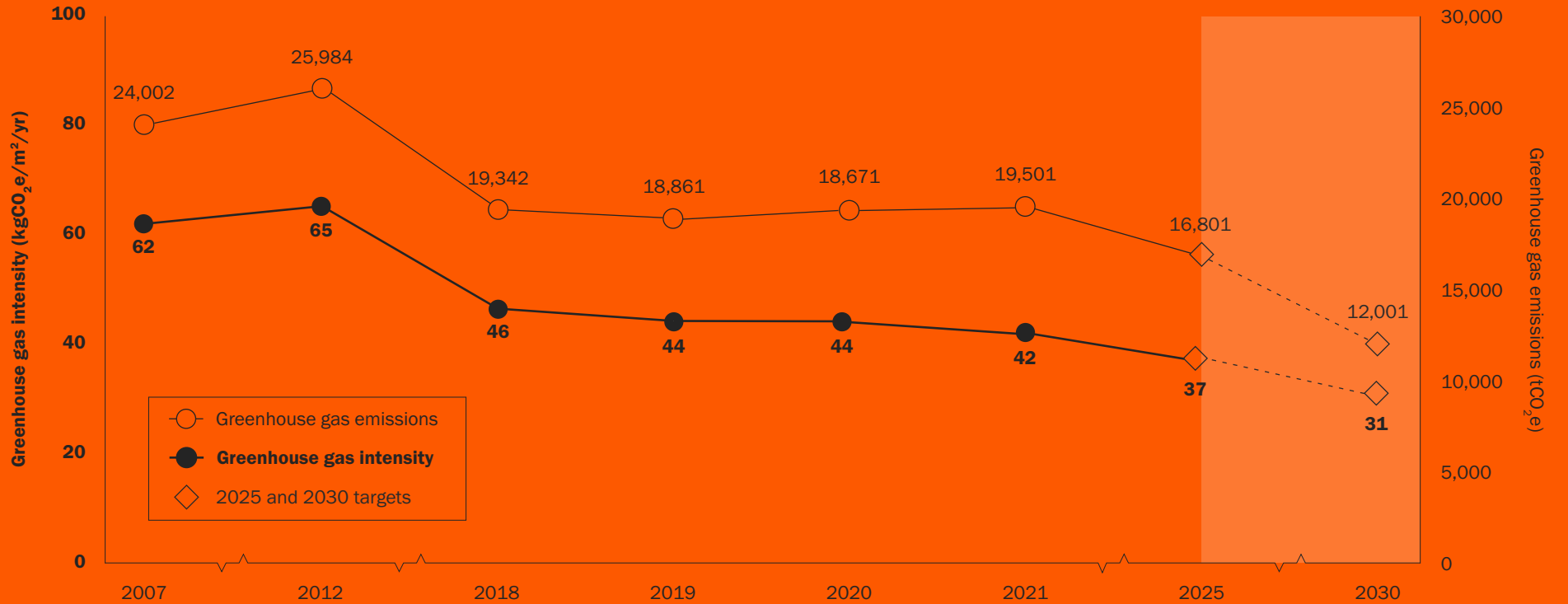
# Greenhouse Gas Emissions and Intensity

Want to learn more about the graphs and how the results are calculated?

[VISIT HERE](#)

**32.5%↓**

GHG intensity has decreased by 32.5% since 2007, and, despite a 20% increase in total usable facility space, absolute emissions have decreased by 18.6%.



NAVIGATION

[Table of Contents](#)

[Executive Message](#)

[Executive Summary](#)

[Our Sustainability Story](#)

[We're Finding Solutions:  
Together.](#)

Our Focus Areas

Climate Change

▶ Energy and Carbon

Food

Leadership and Innovation

Materials

Transportation

Water

[Writing the Story We Want,  
Now and in the Future](#)

[References](#)

DOWNLOADS

[PHSA Climate Change  
Accountability Report](#)

[Vancouver Coastal Health EPAR](#)

[Providence Health Care EPAR](#)

[Fraser Health EPAR](#)

## Challenges to reaching our targets

- ▶ Integration can be improved through more coordination between the EES team and the FMO teams to better integrate energy, emission and water management strategies; infrastructure; and equipment into funding requests.
- ▶ There have been supply chain challenges related to delays in delivery of equipment and restrictions to contractor availability, which have impacted mechanical and lighting projects.
- ▶ Many remaining opportunities to reduce energy use and carbon emissions across our facilities are no longer low-hanging fruit and require larger projects and timelines to tackle. It would be helpful to have increased flexibility from year-to-year spending to support larger capital investment and potentially allow the accumulation of annual unspent funding into a separate pot to pull from in future years.
- ▶ Some of the technical solutions that can address challenges to meeting our climate targets are complex. In order to bring these solutions to our sites and use them effectively, there is a need to provide required training, education and skill development opportunities to our FMO team to help them become comfortable in operating building systems that are complex and different from the older and more common systems with which they have worked in the past.

“  
**We should be bringing  
 environmental priority into every  
 department meeting and make  
 it a standing agenda item.**

– GreenCare Survey respondent



## OUR STORY

### Many hands make light work

Collaboration is at the heart of a suite of initiatives aimed at reducing energy use and GHG emissions from BC Cancer buildings and operations. While delivering cancer care to British Columbians, the agency is working hard to reduce health care's environmental impact. This has been a collaborative effort across BC Cancer with input from leadership, Facilities Maintenance and Operations, the Project Management office and many others, including the EES team. “There has been a lot of engagement and collaboration across BC Cancer on these energy efficiency initiatives,” says Ghazal Ebrahimi, PHSA energy and carbon emissions manager.

These projects across the province have been integral in reducing total energy consumption, cost and carbon emissions, annually saving more than 25,000 GJ of natural gas, over 900,000 kWh of electricity, and approximately 1,300 tonnes in GHG emissions. In addition, they will save BC Cancer more than \$360,000 in energy and carbon offset costs each year.

And it's not just about the significant energy and carbon savings. This work in Vancouver, Victoria, and Surrey has a direct impact on everyone's well-being and experience in BC Cancer facilities, bringing positive changes to the lives of clinicians, staff and patients.

[Read more ▶](#)



NAVIGATION

Table of Contents

Executive Message

Executive Summary

Our Sustainability Story

We're Finding Solutions:  
 Together.

Our Focus Areas

Climate Change

Energy and Carbon

▶ Food

Leadership and Innovation

Materials

Transportation

Water

Writing the Story We Want,  
 Now and in the Future

References

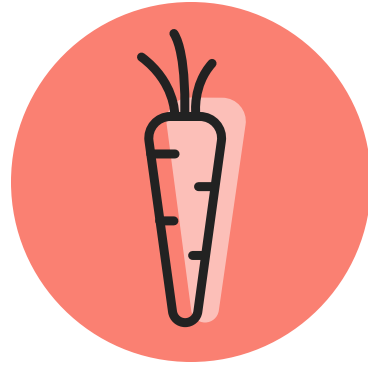
DOWNLOADS

PHSA Climate Change  
 Accountability Report

Vancouver Coastal Health EPAR

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### 3. Food

Our goal: Develop plant-based, local, culturally relevant and equitable food service to advance food as medicine.

LEARN MORE

A new Focus Area in 2021, this is a great example of how a Focus Area can be interrelated with others and how meaningful impact requires working together. This collaborative work includes the following:

- ▶ Improving patient and staff options for food in our facilities will reduce waste and GHG emissions. This is the work of many dietitians and medical and food services staff at PHSA and in partnership with efforts at Fraser Health, Providence Health Care and Vancouver Coastal Health.
- ▶ New facilities and major renovations at our facilities offering opportunities for capital project teams to consider food assets (places where people can grow, prepare, share, buy, receive or learn about food) on site or adjacent
- ▶ Public health staff working on community-led solutions towards sustainable, equitable and just local food systems in order to keep populations healthy, reducing pressure on the health-care system

appropriate food. Moreover, the annual GreenCare Survey results continue to show that direct care staff support the development of a menu that would aim to improve inpatient satisfaction and decrease environmental impact.<sup>B</sup>

As a partner in these efforts, the EES team is helping to identify the environmental impacts of food choices, food-related climate resilience measures and best practice in other health systems. In addition, we are providing Green+Leaders with seed-funding for projects that include workplace gardens and food initiatives. The momentum for this work is palpable, and it is highly collaborative. Staff are increasingly expressing their interest in healthy, local and culturally

### 2021 actions

- ▶ Creation of a [toolkit](#) for sustainable food choices
- ▶ Successful application and selection to the [2021-2023 Nourish Anchor Cohort Collaborative](#), leading to innovative cross-health authority collaboration around healthy, sustainable and culturally appropriate food in health care
- ▶ Inclusion of environmental impact questions in retail food and food services requests for proposals (RFPs)
- ▶ Update of the Public Health Food Security Action Plan initiated in order to emphasize the impacts of climate change on food systems and food security

NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

Our Focus Areas

Climate Change

Energy and Carbon

▶ Food

Leadership and Innovation

Materials

Transportation

Water

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

**Our partners**

Indigenous Health

Business Initiatives Support Services

Clinical dietitians

Population and Public Health

Quality Improvement

Sustainable Food Operations Committee

**Our achievements**

- ▶ Successful application to the [2021-2023 Nourish Anchor Collaborative Cohort](#)

“  
[A] seismic shift [is] needed.  
Healthy, fresh plant-based diet[s]  
should be available throughout any  
health-care facility, and [we should  
move] away from [predominant]  
fast-food meat ... offers.

- PHSA GreenCare Survey respondent



OUR STORY

**The fruits of their labour**

Inspired by the beautiful landscape of Victoria, BC Cancer Pharmacy Professional Practice Leader Kimberly Kuik spearheaded a workplace garden project, starting with applying for Healthy Promotion Initiative Fund (HPIF) funding. BC Cancer – Victoria is one of approximately 190 health-care teams that, over the years, have benefitted from Energy and Environmental Sustainability team and PHSA’s HPIF grant initiative. HPIF grants support projects that promote active and clean transportation initiatives, workplace garden spaces, etc. through grants.

Since healthy eating has always been a part of Kimberly’s life, the garden would be a way to share her passion for food with her colleagues. It was also an opportunity to bring centre staff together while growing food they could enjoy together.

Using HPIF funding, the BC Cancer – Victoria team purchased three raised garden beds, soil and seeds. After a slow start, their vegetables are starting to flourish, Kimberly says, and the garden is producing enough to share. “We are planning a salad day to distribute the abundance of lettuce that is ready.”

Now, the hard work of setting up and planting the garden is behind them and the group is enjoying the fruits of their labour. For years to come, the garden beds will be a reminder of what they can grow when they come together.

**Read more ▶**



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

▶ Leadership and Innovation

Materials

Transportation

Water

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**



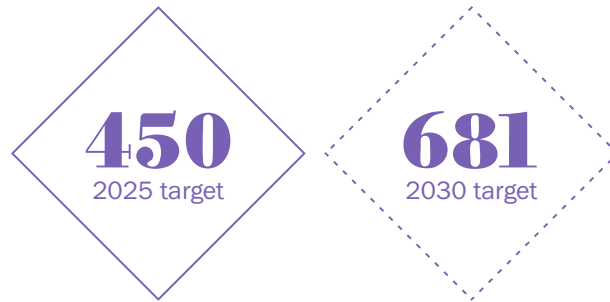
## 4. Leadership and Innovation

Our goal: Collaboratively foster a culture of transformative leadership and innovation for environmental sustainability in health care.

LEARN MORE

### Our 2025/2030 targets

Increase total number of **Green+Leaders**.



### Snapshot in numbers

**10**

Green+Leader newsletters

**6**

lunch and learn/dialogue sessions

**2**

orientation sessions

**1**

recruitment campaign

## NAVIGATION

### Table of Contents

### Executive Message

### Executive Summary

### Our Sustainability Story

### We're Finding Solutions: Together.

#### Our Focus Areas

Climate Change

Energy and Carbon

Food

▶ Leadership and Innovation

Materials

Transportation

Water

### Writing the Story We Want, Now and in the Future

### References

## DOWNLOADS

### PHSA Climate Change Accountability Report

### Vancouver Coastal Health EPAR

### Providence Health Care EPAR

### Fraser Health EPAR

## 2021 actions

- ▶ Refreshed GreenCare website with input from the PHSA Communications team and Green+Leaders
- ▶ Sponsored the green stream of the Health Promotion Initiatives Fund
- ▶ UBC Sustainability Scholar supported the EES team to research monitoring and assessment frameworks for engagement
- ▶ Supported implementation of the B.C. Ministry of Health's chapters on Carbon Neutral and Climate Resilient Health Care Facilities and Environmental Sustainability and LEED Gold Certification in the Health Capital Policy Manual as part of business planning for major strategic projects

## Challenges to reaching our targets

- ▶ Engagement activities shifting from face to face to virtual due to COVID-19
- ▶ Staff and medical staff experiencing COVID-19 fatigue
- ▶ Undertaking effective and customized communications and engagement efforts to connect with such a large group of diverse staff roles, positions and departments
- ▶ Competing staff priorities, and environmental sustainability not seen as part of everyone's job description
- ▶ Supporting staff to go from passive engagement to active action-taking as GreenCare network members and Green+Leaders
- ▶ Sustaining active participation of Green+Leaders and growing the community

## Our partners

BC Hydro

CASCADES Canada

Clinical and non-clinical direct-care staff

Communications

Innovation, Planning and Transformation

People and Culture

Population and Public Health

## Our achievements

- ▶ In 2021, seven new staff registered for the program, bringing the total number of Green+Leaders at PHSA to 260 since 2009. This is a low number of registrations compared to previous years but, due to the pandemic, it was not unexpected.
- ▶ Launched new GreenCare website; since then it has averaged 1,300 users a month, and has seen an increase in Green+Leader registrations by 75% (from 3/month to 5.25/month)
- ▶ Nine grants sponsored by the GreenCare sustainability stream of the Health Promotion Initiatives Fund (HPIF), and approximately \$7,500 distributed to recipients of the grant
- ▶ Two staff featured in the Green+Leaders Together Campaign

“

**I am excited that the conversation is growing and I'm hopeful we will be able to put the ideas into action.**

– PHSA GreenCare Survey Respondent



## OUR STORY

### Employee orientation goes paperless

In 2021, Amanda Welsh, at the time a practice educator at the BC Patient Transfer Network and a Green+Leader, saw an opportunity to save paper by migrating the employee orientation program online. With COVID-19 health and safety requirements, an online classroom was more than just a dream. It was a necessity.

Amanda and her team conducted a thorough assessment of the curriculum development process, created a virtual classroom, and eliminated the binder course packs that were historically given to each new employee. Eliminating the production of paper course packs saves about 5,000 sheets of paper, the equivalent of five trees every three years. Imagine the impact if other curriculums across the health organization were digitized!

The achievement of making the employee orientation program paperless has been very rewarding for Amanda. Her team is now more thoughtful about their paper usage, and that's a culture shift. According to Amanda, even if only one tree is saved, our planet is better for it and that feels really great.

[Read more ▶](#)



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
 Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

▶ **Materials**

Transportation

Water

**Writing the Story We Want,  
 Now and in the Future**

**References**

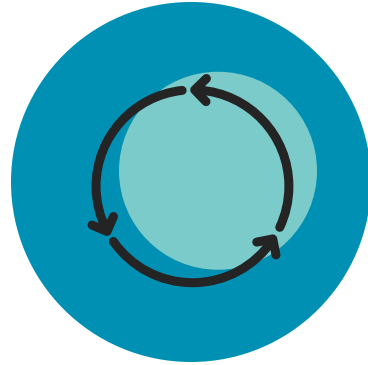
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**PHSA Climate Change  
 Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**



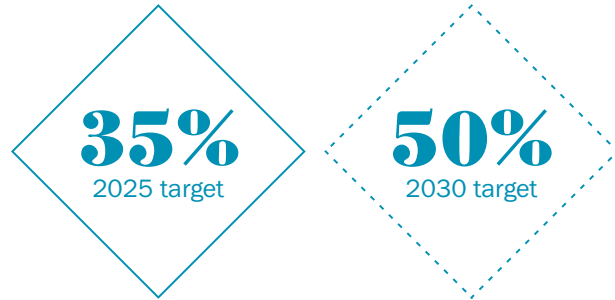
## 5. Materials

Our goal: Choose materials and products that contribute to human and environmental health while avoiding waste and unnecessary chemicals.

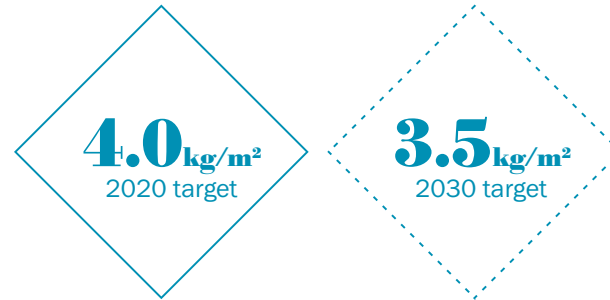
LEARN MORE

### Our 2025/2030 targets

Increase waste-diversion rates at existing acute and long-term care sites to:



Decrease waste-intensity rates at existing acute and long-term care sites to:



### Snapshot in numbers

**714**

staff took the Waste Management module on the Learning Hub

**1,199**

tonnes of non-hazardous waste were generated, equivalent to 240 elephants

NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
 Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

▶ **Materials**

Transportation

Water

**Writing the Story We Want,  
 Now and in the Future**

**References**

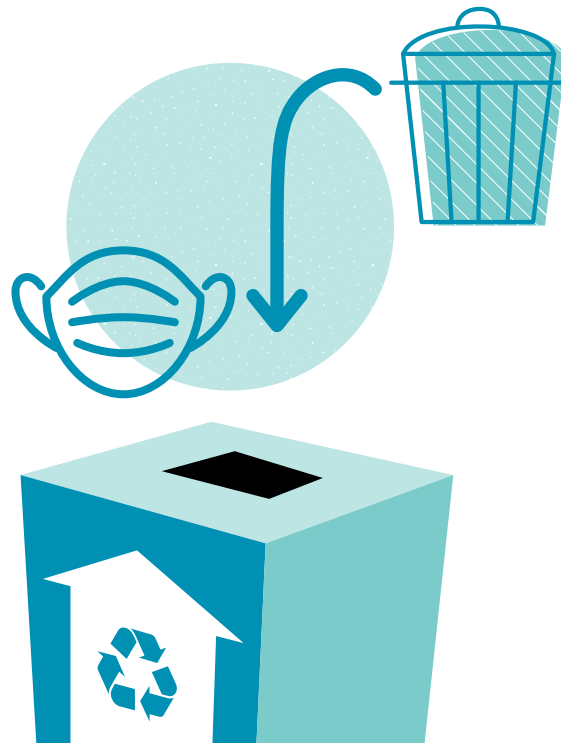
DOWNLOADS

**PHSA Climate Change  
 Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**



**Our 2021 actions**

- ▶ Sustainable Food Operations committee identified food waste reduction strategies and reduced single-use plastic waste
- ▶ Supported an Operating Room Sustainability Ideas Generation campaign
- ▶ Researched best practice communications for circular economy in health care
- ▶ Worked with PHSA Supply Chain and clinicians to understand the environmental impact of disposable items used in surgery

**Our partners**

- Business Initiatives & Support Services
- Environmental Vendor Services
- Facilities Maintenance and Operations
- Facilities Management Procurement
- Infection Prevention and Control (IPAC)
- PHSA Supply Chain
- Projects and Planning teams
- Provincial Nursing Skin and Wound Committee (PNSWC)
- Quality Improvement
- Sustainable Food Operations Committee
- Workplace Health & Safety

**Our achievements**

- ▶ Created the Circular Health Care Framework, intended to support departments at PHSA to develop strategies to avoid and reduce waste
- ▶ Used environmental questions in annual pre-qualification for Facilities Management contractor services and in the disposable surgical packs, drapes and gowns requests for proposals (RFPs)



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
 Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

▶ **Materials**

Transportation

Water

**Writing the Story We Want,  
 Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
 Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

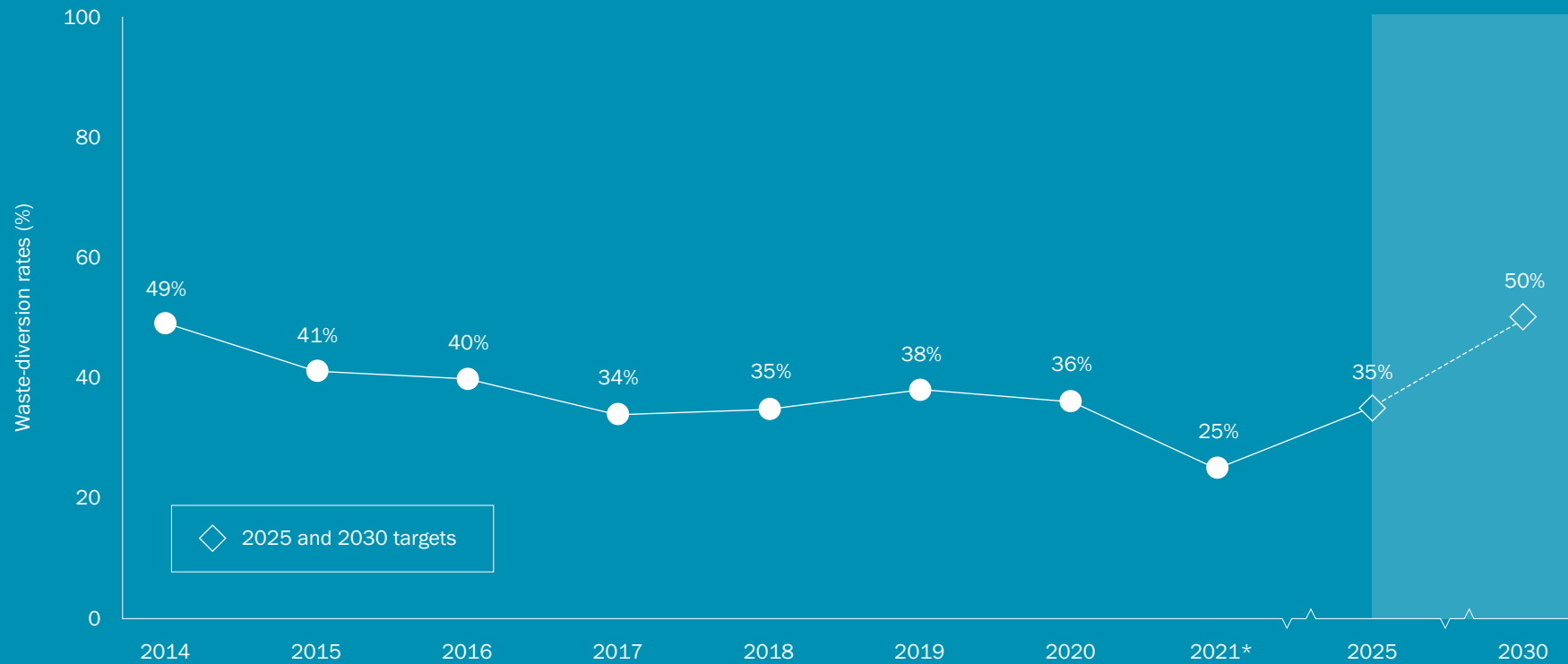
**Fraser Health EPAR**

# Waste-Diversion Rates

Want to learn more about the graphs and how the results are calculated?

VISIT HERE

We have not made tangible progress toward our waste diversion goal, and aggressive garbage waste reduction is needed.



\* Our waste diversion reflects only waste segregation, as our recycling provider paused the collection of recycling for most of 2021 due to concerns for staff safety during the COVID-19 pandemic. All recycling and general

garbage streams were instead taken to a local waste-to-energy facility. Recycling was restarted in smaller facilities in November 2021.

NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
 Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

▶ **Materials**

Transportation

Water

**Writing the Story We Want,  
 Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
 Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

# Waste-Intensity Rates

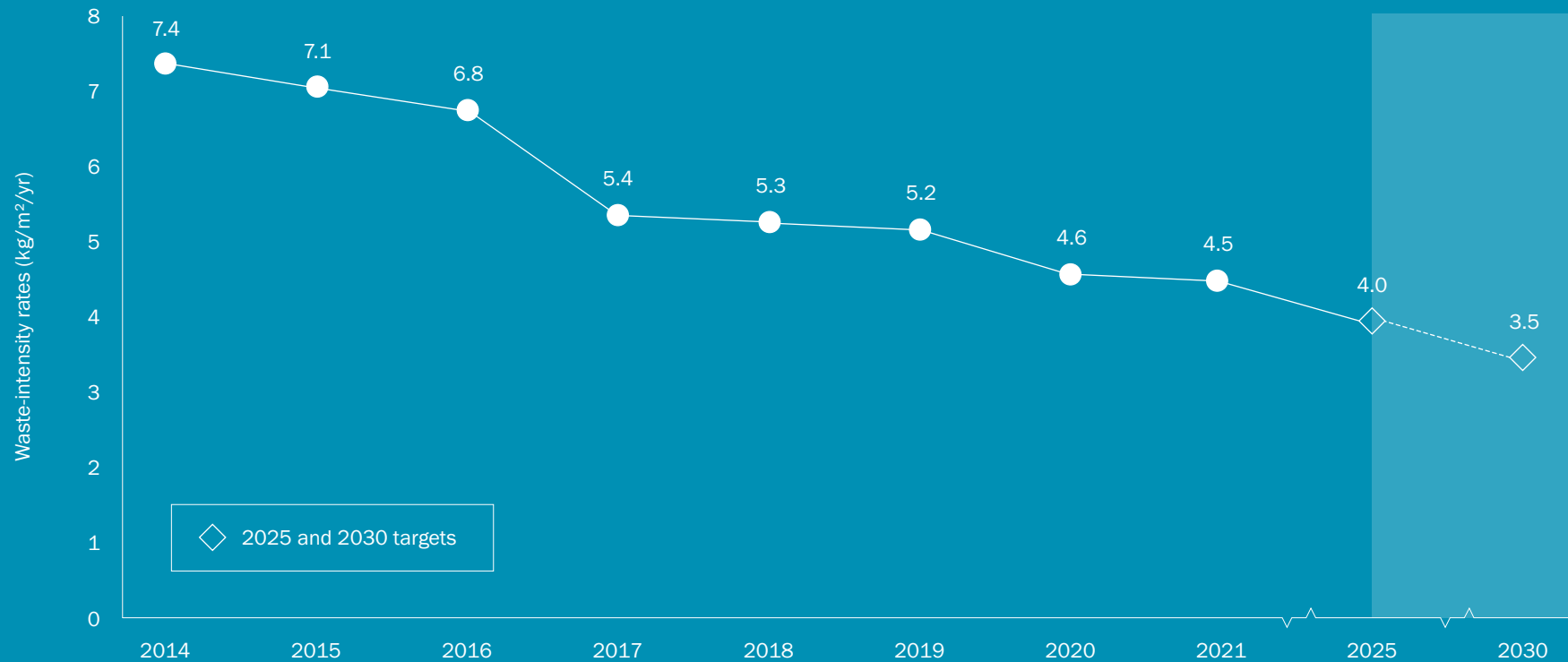
Want to learn more about the graphs and how the results are calculated?

VISIT HERE

**39%** ↓



Total waste intensity has decreased by 39% since data collection was initiated in 2014.



\* Results include the Red Fish Healing Centre for Mental Health and Addiction, which opened in October 2021. Inclusion of the data means the waste volume is higher,

but it lowers the waste intensity since it does not include a whole year of data.



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

▶ Materials

Transportation

Water

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

## Challenges to reaching our targets

- ▶ Recycling is limited by [global market demand](#), ability of local processors, complexity of materials and facility logistics.
- ▶ Clinical engagement on waste reduction is hindered by competing priorities, and lack of time, capacity and resourcing.
- ▶ Organizational priorities need to shift away from recycling alone, and toward reusables over disposables, using an asset-sharing platform to prevent usable items from going into landfill, and prioritizing repair over replacement.



**Why is leadership not seeking out environmentally conscientious companies for their products? EVERYTHING in health care is packaged in plastic, and we do nothing about it.**

– 2021 PHSA GreenCare Survey respondent

## OUR STORY

### Cooking up change

Food Manager José Morais and the Forensic Psychiatric Hospital culinary team were no strangers to massive cookie demands. Through baking alone, the kitchen he manages consumed 1,000 paper sheet liners every six weeks. On top of the significant paper packaging waste these liners generated, there is also a hefty price tag, with a case of pan liners costing the kitchen \$260.

When the Food and Nutrition Services team tallied up these environmental and monetary costs, the choice to reduce the amount of paper used while cooking seemed obvious. The kitchen was committed and, in November 2021, decided to find a way to reduce or eliminate the use of paper liners. In fact, they were so committed that they decided to take a hard stance and, starting in May 2021, replaced the liners with silicone mats.

The culinary team is now on track to save approximately \$3,000 annually in baking supplies and prevent approximately 20 kilograms of waste from going into the landfill. José is optimistic for a future where hospitals across North America can take a significant bite out of environmental waste — a delicious outcome for both patients and the planet.

**Read more ▶**



NAVIGATION

Table of Contents

Executive Message

Executive Summary

Our Sustainability Story

We're Finding Solutions:  
Together.

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

Materials

▶ Transportation

Water

Writing the Story We Want,  
Now and in the Future

References

DOWNLOADS

PHSA Climate Change  
Accountability Report

Vancouver Coastal Health EPAR

Providence Health Care EPAR

Fraser Health EPAR



## 6. Transportation

Our goal: Increase access to and use of transportation modes that reduce negative environmental impacts and benefit human health and wellness.

LEARN MORE

### Our 2025/2030 targets

Increase staff commuting by sustainable  
transportation modes.



Increase staff commuting by active transportation.  
(new target)



### Snapshot in numbers

**6**

Level 2 charging stations and 19 Level 1  
charging stations

**2**

hospital shuttles provided a total of 40,432  
rides to PHSA staff

**2**

of 9 cores sites have secure bicycle  
storage (i.e. a bike room or cage)  
and showering facilities



## NAVIGATION

### Table of Contents

#### Executive Message

#### Executive Summary

#### Our Sustainability Story

#### We're Finding Solutions: Together.

##### Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

Materials

▶ Transportation

Water

#### Writing the Story We Want, Now and in the Future

#### References

## DOWNLOADS

#### PHSA Climate Change Accountability Report

#### Vancouver Coastal Health EPAR

#### Providence Health Care EPAR

#### Fraser Health EPAR

## Our 2021 actions

- ▶ Completed an electric vehicle (EV) baseline and feasibility study to inform a regional EV strategy inclusive of staff/public charging, as well as health organization fleet electrification
- ▶ Actively promoted Go By Bike Week, by hosting education stations at BC Children's Hospital and BC Women's Hospital + Health Centre
- ▶ Created the Sustainable Transportation webinar series to inform, enable and empower health-care staff to make changes to how they get around
- ▶ Three cycling storage projects completed by staff, supported by the PHSA Health Promotion Initiatives Fund

## Our partners

BC Hydro

Climate Action Secretariat

Integrated Protection Services, Commuter Services

PHSA Supply Chain

Population and Public Health

## Our achievements

- ▶ Commuting by EV has increased from 4% to 8% of commutes (compared to 2020).
- ▶ Commuting by gas or diesel single occupancy vehicle decreased by 11% (compared to 2020).
- ▶ Commuting by public transit increased by 6% (compared to 2020).



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
 Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

Materials

▶ Transportation

Water

**Writing the Story We Want,  
 Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
 Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

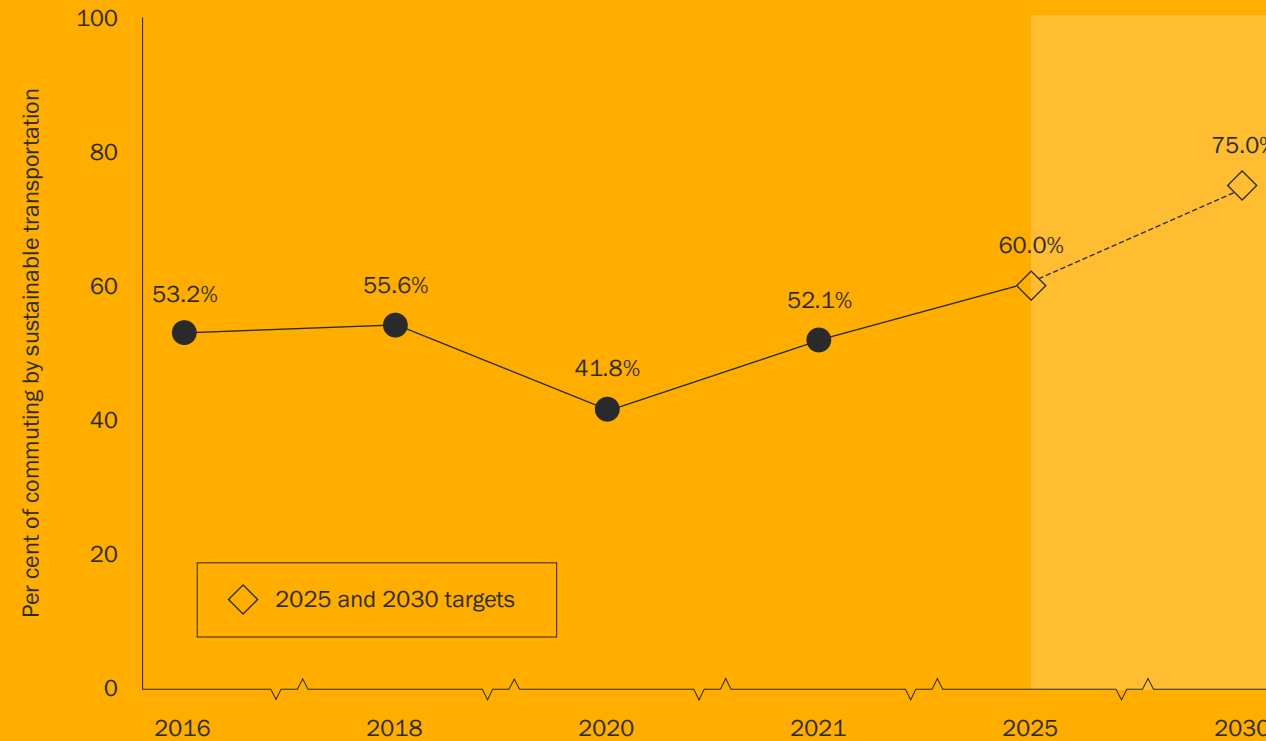
# Sustainable Commuting

Want to learn more about the graphs and how the results are calculated?

VISIT HERE

**10%** ↑

Sustainable commuting by PHSA staff increased by 10% since 2020.





NAVIGATION

[Table of Contents](#)

[Executive Message](#)

[Executive Summary](#)

[Our Sustainability Story](#)

[We're Finding Solutions: Together.](#)

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

Materials

▶ [Transportation](#)

Water

[Writing the Story We Want, Now and in the Future](#)

[References](#)

DOWNLOADS

[PHSA Climate Change Accountability Report](#)

[Vancouver Coastal Health EPAR](#)

[Providence Health Care EPAR](#)

[Fraser Health EPAR](#)

**Challenges to reaching our targets**

- ▶ Access to sustainable commuting is dependent on municipal and regional transportation infrastructure between home and work locations.
- ▶ Long commuting distances limit the feasibility of using active modes of transportation, such as cycling and walking.
- ▶ Lack of access to safe, connected and frequent cycling and transit networks for PHSA sites outside of urban centres is a barrier.
- ▶ There is currently no transit incentive program offered to PHSA staff within the Lower Mainland or throughout the rest of the province.
- ▶ Limited ability to make changes to leased buildings makes it difficult to improve staff access to sustainable transportation options (such as EV charging or secure bike storage).

“

**Worksites should be leaders in environmental initiatives ... [and] support better commute options in all areas (not just the Lower Mainland).**

– PHSA GreenCare Survey respondent

**What do PHSA staff have to say about electric vehicles (EVs)?<sup>B</sup>**

**13%**  
currently own an EV.

**45%**  
plan to own an EV in the next five years.

OUR STORY

**Shelter from the storm**

“There’s always something you can do,” says Arthur Gregoris, a primary care paramedic with BC Emergency Health Services based in Penticton. Arthur believes that all health-care staff can contribute to environmental sustainability in their workplace.

Arthur saw the need for a safe and secure place for station paramedics and staff to store their bikes at Station 329, so he developed a solution, got funding for it through PHSA’s Health Promotion Initiatives Fund (HPIF) and oversaw its implementation. Arthur and his co-worker, Scott Pittendreigh, a dedicated bike commuter, established a bike shelter, using a vertical system to optimize the small space available at their station. The pair ensured that the design included features to accommodate e-bikes and other micro-electric mobility platforms.

Arthur hopes that other ambulance stations will be able to replicate and adapt the bike shelter for their spaces. Being able to shelter mobility devices from the elements and theft is an “easily actionable” and “relatively inexpensive” way to encourage others to bike to work. It’s a great example of simple implementation resulting in a significant impact.

[Read more ▶](#)



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

Materials

Transportation

▶ Water

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**



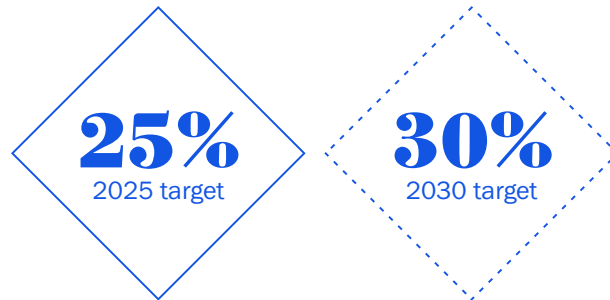
## 7. Water

Our goal: Minimize water consumption to reduce demand on natural resources and impact on our living environments.

LEARN MORE

### Our 2025/2030 targets

Reduce building water-utilization intensity.



### Snapshot in numbers

**2**

energy-saving projects completed, which also contributed to water savings

**5**

LEED water efficiency points targeted for the new Red Fish Healing Centre for Mental Health and Addiction by choosing low-flow fixtures and appliances

**1**

acute care site working towards a five-year Pollution Prevention Plan to improve and reduce wastewater effluent, in compliance with the Metro Vancouver bylaw



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

Materials

Transportation

▶ Water

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

**Our 2021 actions**

- ▶ UBC Sustainability Scholar helped identify water-saving opportunities for health-care facilities in [new report](#)
- ▶ Optimized landscape irrigation
- ▶ Investigated and promoted use of low-flow devices, where applicable

**Our partners**

BC Emergency Health Services

Climate Action Secretariat

Facilities Maintenance & Operations

Finance

Ministry of Environment and Climate Change Strategy

Ministry of Health Capital Services Branch

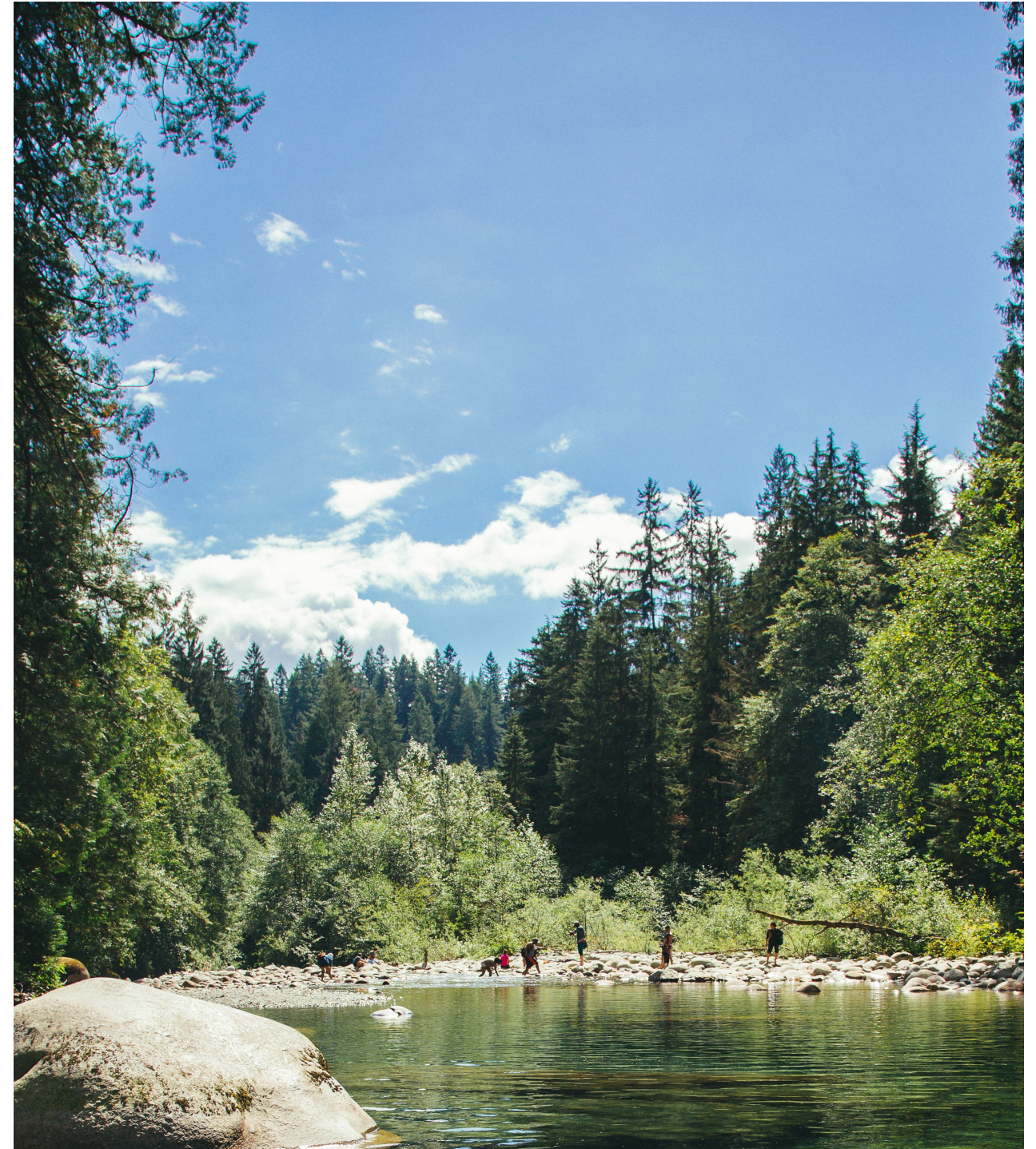
Municipal governments

Projects & Planning teams

PHSA Supply Chain

**Our achievements**

- ▶ Engaged 40 stakeholders across various departments to identify water saving challenges and opportunities
- ▶ Water management research project developed a road map intended to support departments at PHSA to develop strategies to reduce indoor and outdoor water consumption





NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
 Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

Materials

Transportation

▶ Water

**Writing the Story We Want,  
 Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
 Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

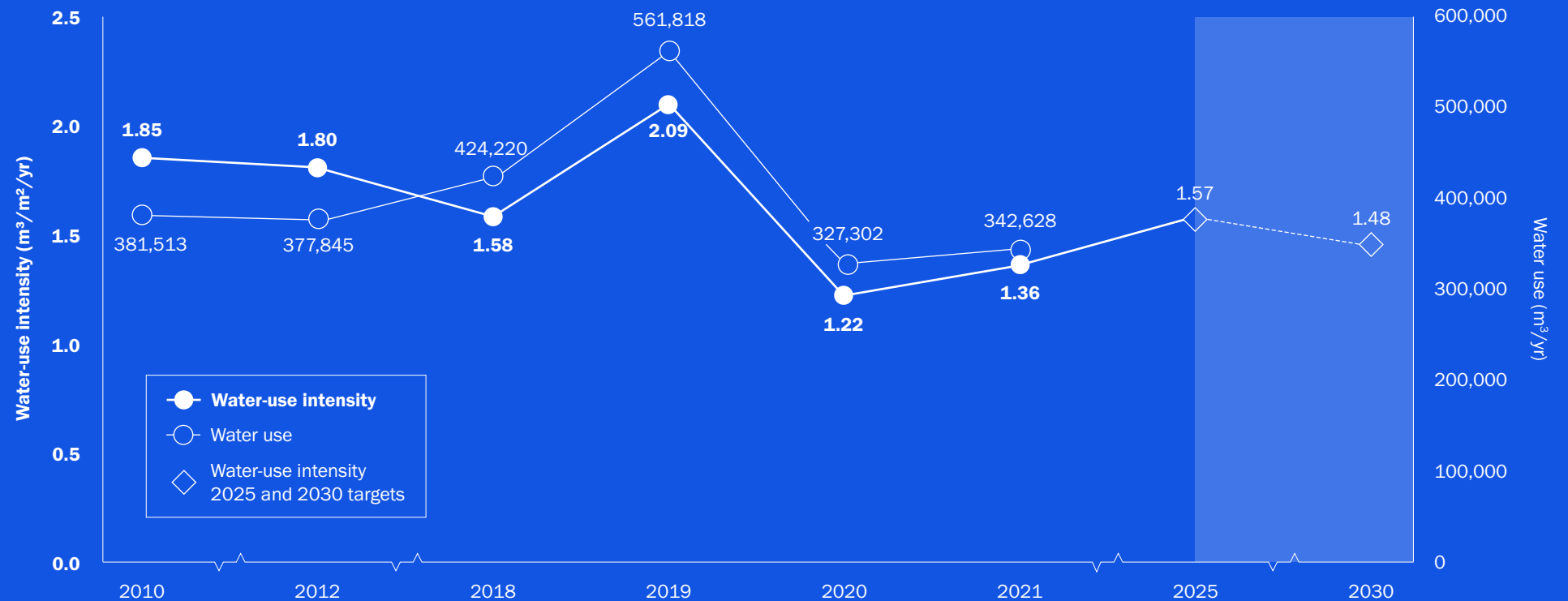
# Water Use and Intensity

Want to learn more about the graphs and how the results are calculated?

VISIT HERE

**26.4%** ↓

Water-use intensity has decreased by 26.4% since 2010, and, despite an increase of 22% in core facility space, absolute water use has decreased by 10%.





NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

Our Focus Areas

Climate Change

Energy and Carbon

Food

Leadership and Innovation

Materials

Transportation

▶ Water

**Writing the Story We Want,  
Now and in the Future**

**References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**



**Challenges to reaching  
our targets**

- ▶ Lack of prioritization of funding and resources
- ▶ Perceived risks to facilities operations and infection control
- ▶ Lack of awareness about water consumption, and educational barriers that reduce willingness for water conservation
- ▶ Lack of a sub-metering system for measuring water usage by different end uses across various sites
- ▶ No existing Water Management Plan

OUR STORY

**Water-saving opportunities in health-care facilities**

Sustainable water use and conservation practices in health-care facilities can have a significant impact on human health and the environment. With the health-care sector being one of the most intensive water users in North America, the EES team has been undertaking research to identify best practices for water conservation.

Under the supervision of Ghazal Ebrahimi, energy and carbon emissions manager at PHSA, UBC Sustainability Scholar Monika Korczewski worked with the EES team on the study. The study reviews opportunities for water management, as well as recommendations for operational, maintenance and training strategies. The final report will offer a range of water-saving opportunities and water management guidance.

“Soon we will have more drought problems, more wildfires, and more and more water restrictions,” says Sabah Ali, a regional energy coordinator. So EES is taking a proactive approach to water management instead of letting the well run dry.

**Read more ▶**

NAVIGATION

Table of Contents

Executive Message

Executive Summary

Our Sustainability Story

We're Finding Solutions:  
Together.

▶ Writing the Story We Want,  
Now and in the Future

References

DOWNLOADS

PHSA Climate Change  
Accountability Report

Vancouver Coastal Health EPAR

Providence Health Care EPAR

Fraser Health EPAR

# 4.0 Writing the Story We Want, Now and in the Future

## Thank you for your ongoing support.

Given the challenges posed by climate change, it's clear that environmental sustainability is everyone's story. If we are to continue to offer staff, volunteers and patients the very best quality of life possible, and support the health and well-being of our families and communities, we must all take responsibility for the environment.

As the many achievements at PHSA demonstrate, much is already being done by so many. But as this report also shows, much more remains to be done. The Energy and Environmental Sustainability team invites the whole health-care community to take actions that will restore and regenerate the interdependent health of people, place and planet — now and for future generations.

**There are a number of ways in which you can make a difference.**

- ▶ Inform and motivate each other to take action to nurture and protect our planet.
- ▶ Share, learn about, and co-develop action plans for sustainability.
- ▶ Innovate, and scale up and out the approaches that are working.
- ▶ Transform our processes and health system away from business as usual.
- ▶ Reinforce and celebrate the change we want to see.

LEARN MORE ABOUT SUSTAINABLE  
AND RESILIENT HEALTH CARE.

Check out the GreenCare website [here](#).

MEET OTHERS INTERESTED IN  
ENVIRONMENTAL SUSTAINABILITY.

Find out more about the Green+Leaders  
program [here](#).

INSPIRE.

Share your environmental sustainability  
story [here](#).



NAVIGATION

**Table of Contents**

**Executive Message**

**Executive Summary**

**Our Sustainability Story**

**We're Finding Solutions:  
Together.**

**Writing the Story We Want,  
Now and in the Future**

► **References**

DOWNLOADS

**PHSA Climate Change  
Accountability Report**

**Vancouver Coastal Health EPAR**

**Providence Health Care EPAR**

**Fraser Health EPAR**

# References

- A GreenCare survey respondents were asked to select from a scale of 0-10 (0=strongly disagree, 5=neither agree nor disagree, 10=strongly agree). The reported percentage of staff who “agree” includes all staff who selected 6-10 for their response.
- B 2022 Provincial Health Services Authority GreenCare Survey [Internet]. British Columbia, Canada: GreenCare Community; 2022 [cited 2022 Jun 8]. Available from: <https://bcgreencare.ca/wp-content/uploads/2022/05/GreenCare-Survey-Infographic-PHSA-3-1.png>
- C PHSA Real Estate Department
- D Partnership with BC Hydro and FortisBC that provides guidance, advice and incentive support for ongoing funding for energy and emissions reduction support projects

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