

2019 Carbon Neutral Action Report



Interior Health
Every person matters



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About this Report

This report was produced by Interior Health (IH). It provides a high-level overview of the actions taken across IH to reduce greenhouse gas emissions. We continually improve our efforts in accordance with the *Climate Change Accountability Act* and Carbon Neutral Government Regulation. In addition, IH has sustainability as a key priority as it supports health in our communities and improves health equity.

This report captures activities for in-scope reporting legislated through the *Climate Change Accountability Act*, as well as activities that support IH’s commitment to being a sustainability leader.

Definitions

By definition, sustainability means “maintaining the integrated health of the environment, society, and economy for today and in the future”. While this report focuses primarily on environmental sustainability actions relevant to Interior Health’s carbon footprint, it recognizes that there are mutually reinforcing connections to financial and social responsibility. In the context of this report and for brevity, the term “sustainability” will refer to environmental sustainability.

The Logic Behind Carbon Offsetting

A carbon offset represents a reduction in greenhouse gas (GHG) emissions that can be used to compensate for, or offset emissions from other sources. Through the Carbon Neutral Government, BC invests in carbon offset projects and each offset project ocean of gases, and reductions in carbon emissions at any one-location benefits the whole system.

Territorial Acknowledgement

Interior Health would like to acknowledge the ancestral, unceded, and traditional territories of the interior region First Nations, including the Dākelh Dene, Tsilhqot’in, Stl’at’imc, Ktunaxa, Sylix, Secwepemc, and Nlaka’pamux Nations, where we live, work, and play.



Message from President and Chief Executive Officer



Climate change is one of the most important environmental issues of our time and we acknowledge that it has never been more critical for health care to take action. As a determinant of health, we recognize the link between the health and wellbeing of British Columbians and the health and well-being of the environment.

We continue to make progress on addressing climate change by shifting our culture and operations, which takes into consideration the environment. Our strategy has been to:

- Focus on efforts that help to “green” our operations – by being resourceful, working with our supply chain and improving our operations to align with our environmental priorities. We do this by emphasizing the co-benefits to health resulting from climate action;
- Influence across our organization and beyond – to encourage our employees to take the environment into consideration in decision-making by communicating employee-led improvements and actions, while strategically using our voice to raise awareness about the health impacts of climate change in order to influence the development of meaningful policy solutions; and,
- Strengthen collaborations in order to build resilience – both within our facilities and within our communities.

Our environmental sustainability policy supports and encourages staff, physicians, volunteers, and internal stakeholders to embed sustainability principles and practices within our operations. This policy is the foundation to strengthening organizational capabilities across our organization.

I am pleased to share the 2019 Carbon Neutral Action Report, which highlights initiatives across our organization; all of which collectively improve our impact on the environment.

Susan Brown
President and Chief Executive Officer



Message from Executive Sponsor



Health care continues to evolve, as do our efforts to improve our carbon footprint. Year over year, Interior Health demonstrates our strong commitment and determination to become an environmentally responsible, sustainable, adaptable and resilient organization.

Our approach focuses on carbon reduction strategies while also recognizing the broader co-benefits resulting from climate action. By identifying and recognizing additional advantages to cost savings or improvements to patient care, we create a wider space for collaboration and build momentum for a cleaner, healthier, safer and more prosperous future.

With limited resources, we look for initiatives that reduce greenhouse gas emissions while leveraging any co-benefits that go beyond contributing to climate change mitigation and adaptation. Reducing fossil fuel emissions or air pollution and the accompanying health and environmental impacts is an obvious co-benefit, but there are many others such as safety, quality, risk management, waste reduction, and resiliency to name a few.

“...we look for initiatives that reduce greenhouse gas emissions while leveraging any co-benefits that go beyond contributing to climate change mitigation and adaptation.”

Thank you for taking the time to read the 2019 Carbon Neutral Action Report, and all the efforts across multiple portfolios in IH to make our facilities communities more sustainable.

Donna Lommer, Vice President, Support Services and Chief Financial Officer



Emissions and Offset Summary Table

Declaration Statement

This Carbon Neutral Action Report (CNAR) for the period January 1, 2019 to December 31, 2019 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2019 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2020 and beyond.

Retirement of Offsets

In accordance with the requirements of the *Climate Change Accountability Act* and Carbon Neutral Government Regulation, Interior Health is responsible for arranging for the retirement of the offsets obligation reported above for the 2019 calendar year, together with any adjustments reported for past calendar years (if applicable). Interior Health (the Organization) hereby agrees that, in exchange for the Ministry of Environment and Climate Change Strategy ensuring that these offsets are retired on the Organization's behalf, the Organization will pay within 30 days, the associated invoice to be issued by the Ministry in an amount equal to \$25 per tonne of offsets retired on its behalf plus GST.

A handwritten signature in black ink, appearing to read "S. Brown".

Susan Brown
President and Chief Executive Officer
Interior Health



Interior Health GHG Emissions and Offsets for 2019

As per the [Directive](#) issued March 31, 2020, each PSO will use their 2018 GHG Emissions as a placeholder for the purposes of their 2019 CNAR.

Total Emissions (tCO ₂ e*)	41,808
Total BioCO ₂ **	49.1
Total Offsets (tCO ₂ e*)	41,759
Offset Investment (\$25 per tCO ₂ e*)	\$1,043,975

* Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measurement, in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** This type of carbon dioxide is a natural component of biogas produced by fermentation of biological sludge at the wastewater treatment plant, along with other gases extracted from it during the filtration and concentration process.



About Interior Health

Who We Serve

Interior Health (IH) was established as one of the five geographically-based health authorities in 2001 by the Government of British Columbia. It is responsible for ensuring publicly-funded health services are provided to over 800,000 residents of the Southern Interior.

Interior Health covers a very large and geographically diverse area of over 215,000 square kilometres. The Interior Health region covers a cross section that includes some of the more rural, remote areas of the province and also some of the fastest growing urban centres.

What We Do

Interior Health is responsible for providing services spanning population health, Aboriginal health and well-being, primary health care and chronic disease management, home and community care, residential care, mental health, substance use, and acute care services.

As well, IH is responsible for clinical and administrative support services, including diagnostic services, information management and information technology, research, education, and public communication.





Actions Taken: Reducing our Footprint

Recognition

Interior Health was recognized for innovation toward fueling a clean energy future by the Canadian Health Care Engineering Society (CHES) through the Wayne McLellan Award of Excellence in Health Care Facilities Management. The award recognized IH for looking at newer technologies such as biomass. Given the benefits from biomass, especially for propane-fueled sites, biomass technology was explored in other sites and plans are now underway to link our Clearwater facility to a district biomass system in the area.



L to R: Steve McEwan, Trevor Fourmeaux, Ryan Galloway, Norbert Fischer, Luis Rodrigues

Strengthening Support

Partnerships and Engagement

2019 also saw more engagement through site visits. From these sessions, eight projects were implemented to include control systems, steam traps and LED lighting upgrades in IH facilities. As well, a further 400 low-cost opportunities were identified for future implementation.

Collaborating for Change

In 2019, a new process using utility savings from successful energy projects rolled out. Utility savings were re-invested in targeted, low cost energy retrofits resulting in compounding effects from the benefits of the initial investment.

IH's Investment: for 8 projects:
\$222,400
Reduction of 305 tonnes CO₂ /year
433,000 kWh electricity savings
6,100 GJ natural gas savings
\$81,000 utility cost savings



Equivalent to the same emissions as driving 1,217,990 km a year

Energy Projects



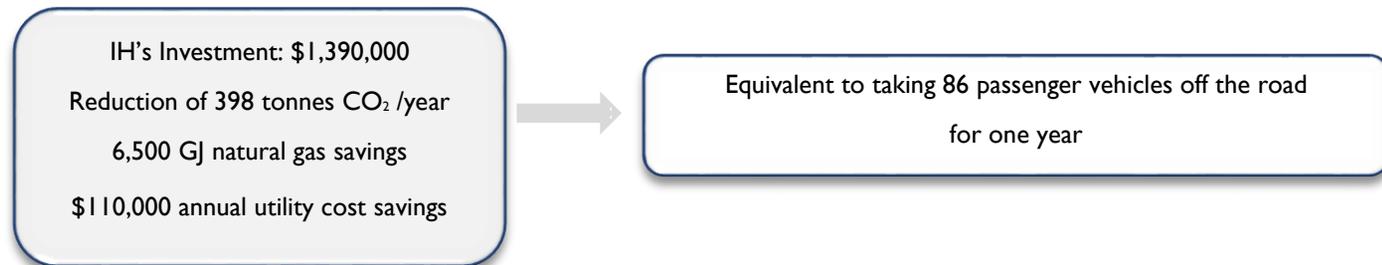
Second Biomass Boiler Installation – Golden and District Hospital

With the success from the first biomass application in health care in the Lillooet facility recognized by CHES, IH installed a second biomass boiler in Golden, BC.

Biomass boilers are an important tool in reducing carbon emissions because the amount of carbon dioxide emitted during the burning process is equivalent to the amount absorbed during the growth of trees. To ensure resiliency and redundancy, the silo and auger were designed to accept both wood chips and pellets, increasing the resiliency of the fuel supply chain during variability in fuel markets. During the first winter in operation, only wood pellets were burned and this is significant because wood pellets have a higher combustion rate, are known for their slow rate of burning and produce less ash residues.



Containerized Biomass Boiler



Co-Benefit

Resiliency & Redundancy



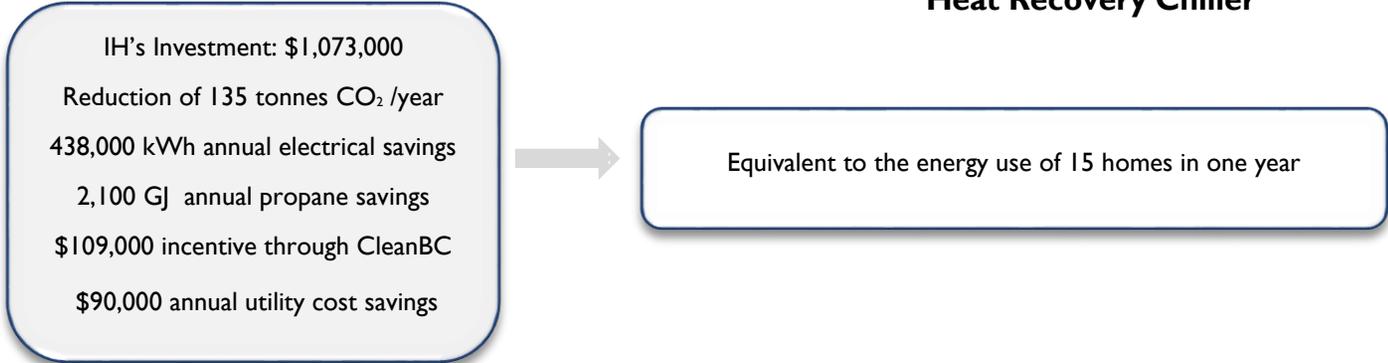
EfficiencyBC: Electrification

Queen Victoria Hospital (Revelstoke)

Finding an efficient means of providing heat to the building represented a tremendous opportunity for electrification in alignment with the provincial CleanBC mandate. The heat recovery chiller replacement at Queen Victoria Hospital was the first project completed through the provincial EfficiencyBC program for building electrification. A heat recovery chiller ensures heat produced during the air conditioning and cooling process is no longer discarded to the atmosphere. Heat recovery addresses this waste, improving building efficiency, reducing carbon footprint and significantly reducing energy use and costs.



Heat Recovery Chiller



Co-Benefit

Electrification, cost savings and less waste

Focus on Patient and Staff Safety

Infrared Heater Replacements across IH

A project replacing 300 baseboard heaters in Long Term Care facilities with infrared heaters yielded both safety improvements and electricity savings. Co-benefits reported by patients included improved thermal comfort with better temperature distribution in patient spaces.



South Okanagan Plant Services Staff (L to R): Nick Muir & Lorne Hilderbrand

IH's Investment: \$247,500
Reduction of 200 kg of CO₂ /year
70,000 kWh annual electrical savings
\$11,000 annual utility cost savings
\$26,000 in incentives from FortisBC

Infrared Heater Replacements

Equivalent to the same as 798 km driven by the average passenger car (i.e. Williams Lake to Trail)

Co-Benefit

Patient safety and thermal comfort



Making the Connection

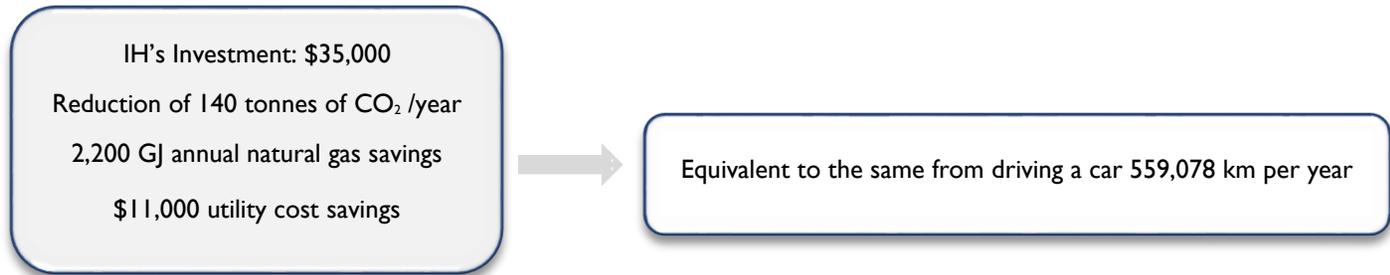
Parkview Place District Biomass Connection (Enderby)

Most district energy systems generate heat at a central plant or extract heat from other sources. The heat is transferred to a fluid, distributed via underground pipes to buildings, and used for space and water heating. In 2019, Parkview Place located in Enderby, BC was connected to the local district energy system installed by FINK Machines and fueled by a biomass system. With this connection, there were cost savings as well as more resiliency and redundancy – the local district energy system with combined heat and power generators can maintain critical power and heating during municipal emergencies, such as ice storms or other incidents that disable the electricity grid.



FINK Machines district biomass plant in Enderby, BC

Biomass Plant Connection



Co-Benefit

Resiliency and Redundancy

Electric Vehicle Pilot

Interior Health's **Fleet Program** led by Craig Paynton, Manager Protection, Parking and Fleet Services and championed by Jessica Campbell, Fleet Coordinator, kicked off a one-year pilot program of three electric vehicles (EVs) to gather important data on their use. Data will be gathered on the EVs range, usage and potential savings in operating costs (fuel and maintenance) from the three dedicated charging stations at Kelowna General Hospital. Joining the fleet are a 2020 Kia Soul, a 2019 Chevrolet Bolt and a 2019 Nissan Leaf.



One of Interior Health's new zero emission vehicles

Co-Benefit

Improved Air Quality

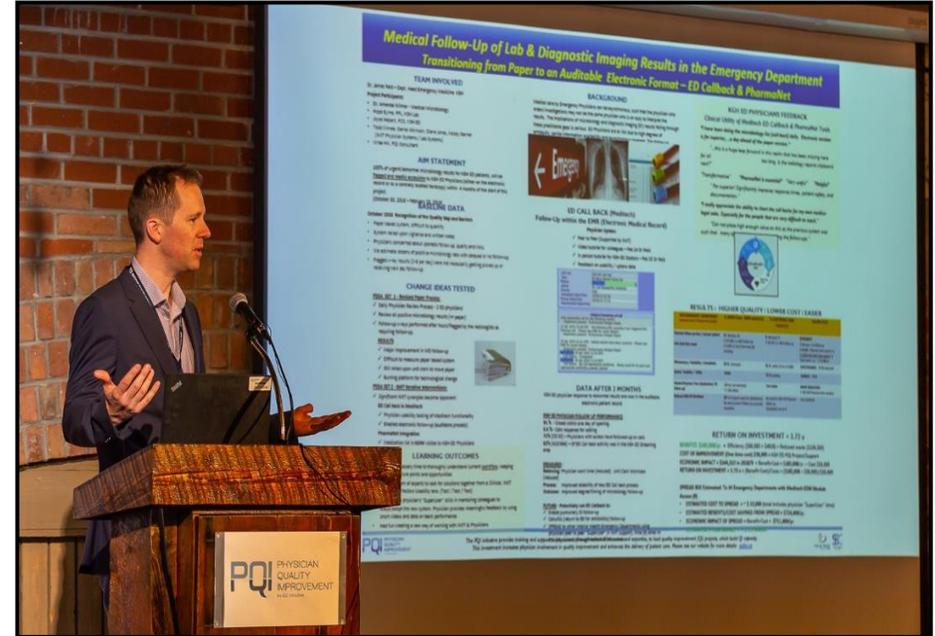
“Our long-term plan is to look at electric vehicles and hybrids across the fleet to reduce the carbon footprint. Our initial analysis shows a slight reduction in emissions, reducing pollution and better overall for general health”.

Craig Paynton, Manager, Protection, Parking and Fleet Services

Quality and Safety Meet Environmental Co-Benefits

Kelowna General Hospital

An initiative at Kelowna General Hospital managed to integrate a triple-bottom line approach (environmental, economic, and social), while ensuring patient safety and quality improvements. A quality improvement project initially focused on patient safety also found environmental co-benefits early in the project-planning phase – the elimination of unnecessary printing of lab data reports in the Emergency Department. The project, started by Carys Jones, Dr. Devin Harris, Dr. James Reid, Wrae Hill, (in Quality Improvement) and an IMIT partner, Kelsey Garner identified process changes to improve quality and patient safety while eliminating printing. The end result: lab results are now stored as PDF's (portable document format) in an electronic folder, accessible only to those with required permissions, eliminating the need to print approximately 192,000 sheets of paper per year.



Dr. James Reid, Head of Emergency Medicine at Kelowna General Hospital

Co-Benefit

Quality and Patient Safety

Changing Practices and Processes for Waste Diversion

Lean Promotion Office

The Lean Promotion team works with staff throughout IH to identify and eliminate waste or non-value-added activities. To influence others, this team no longer provides paper copies of course materials – and discourages participants from printing documents. As well, outcomes from Lean exercises such as a Rapid Process Improvement Workshop at Royal Inland Hospital’s Ambulatory Care Unit identified an opportunity to reduce waste by examining intravenous (IV) start kits. Some items in the kits were required, but not all. The result from this exercise – less waste.

Vernon Jubilee Hospital - Pharmacy Department Waste Minimization

It began with removing one light bulb from each fluorescent light fixture in the Dispensary to reduce energy use – 32 bulbs were removed without compromising the amount of light required to complete tasks. At an average price of \$0.10 per kWh, removing the average 14W bulb provided a small energy cost savings of \$392.64 for the department. The team also labelled recycling bins with products accepted in the recycling stream to avoid contamination. Next, education was the focus – what can and can’t be recycled and how. Taking recycling one step further, employees bring used pens, markers, sharpies, and highlighters to “Staples” recycling program. Lastly, the team reduced the number of garbage cans in the department to ensure the plastic garbage bags were full – no more half full plastic garbage bags being sent to the landfill.



Top: Dionne Martyn, Bottom: Trina Heib & Jackie

Co-Benefit

Engaged Staff



Biking for Health

A partnership between the Kootenay Boundary Physician's Association (KBPA) and the Kootenay Boundary Regional Hospital Administration (KBRHA) nets funding for new secure bike parking. Less cars equals less emissions.

Bike to Work Week May 27-June 2, 2019

432 riders in 68 teams participated, logging in 1,758 trips, and covering over 15,318 km in IH's region. Collectively, they burned 226,950 calories and saved over 1,638 kg of greenhouse gas emissions.

Equivalent to the same emissions from an average passenger car driving 6445 km!

Co-Benefit

Improved Health

Klaus Mey, an Occupational Therapist at Kamloops Home Health, a Sustainability Associate and an avid cyclist – managed to do his home visits on two wheels! With just a little bit of ingenuity, Klaus was able to load all his home visit equipment on his bike.

We want to know...

Are you participating in Bike to Work Week from May 27 to June 2?



- Yes (189)
- No (911)
- Maybe, I'd like to learn more. (69)



Patient Care Meets Environmental Co-Benefits

Community Wide Scheduling Appointment Reminder Pilot

The IH Meditech Community-Wide Scheduling (CWS) Systems Support Team is leading the charge to deliver automated electronic appointment reminders via text or phone call reminding IH patients of their upcoming medical appointments. A 12-month pilot with Heart Function Clinic started in fall 2019 and includes four IH clinics: the Royal Inland Hospital Vascular Improvement Program; Healthy Heart Clinic; the Kamloops Home & Community Care Clinic and Penticton Integrated Health.

Multiple objectives and co-benefits will be realized through this initiative including reduction of carbon, staff workload, mail costs, missed patient appointments and patient wait times. Patient appointment reminders will be expedited, the back-filling of no-shows will be completed sooner, and patient follow-up and pre-appointment instructions will improve.



L to R: Jade Bateman, Justine (Jan) Scheuer, Heidi Schilling

Co-Benefit

Health System Optimization



Improved Service and Safety Meet Environmental Co-Benefits

Patient Choice Meal Service

Starting in Penticton Regional Hospital and rolling out further across IH, the patient choice meal service provides options with meal choices, improving nutrition and fostering faster healing. With alternatives, one of the multiple co-benefits along with cost-savings, includes less food waste.

Co-Benefit

Quality and less waste

Streamlining Chemical Use

Support Services – responsible for housekeeping, plays a role in minimizing infections and efficient facility operations –embarked on an initiative to streamline IH's chemical supply. What began as a safety initiative to eliminate the most harmful chemicals whenever possible in order to reduce the risk of injuries, quickly morphed into a project with a co-benefit to the environment: the reduction in toxic chemical use.

Co-Benefit

Safety

Shift to Locally Grown Food

Interior Health advanced locally grown food in our facilities through the Feed BC initiative. Our goal is to spend 30 per cent of our overall food expenditure on locally produced and/or processed foods. Less transport equals less emissions, less preservatives and processing equals better health. By the end of fiscal year 2019, IH had met the goal and spent 31 per cent on locally grown food.

Co-Benefit

Buy Local





Efficiency and Cost Savings Meet Reduced GHG Emissions

Home Support Scheduling Modernization Project – Procura

This initiative to ensure over 1,200 community home support workers are scheduled efficiently produces numerous benefits, including cost savings. The project will reduce mileage travelled by community health workers by scheduling them geographically, not requiring them to pick up the paper schedules from the office daily or sign paper flow sheets. In addition, it will result in numerous efficiency, worker safety, quality, productivity and standardization-related outcomes.

Co-Benefit

Efficiency

Continual Improvements to our Infrastructure

A typical work day in IH sees an average of 125 teleconferences – 60 of which might take place simultaneously at peak time – utilizing 250 phone lines. In 2019, further improvements were made to support virtual meetings whenever possible and reduce fleet vehicle usage.

Co-Benefit

Less Travel Costs

Building Partnerships for Impact

In partnership with the Lower Mainland health organizations and the Provincial Health Services Authority (PHSA) Supply Chain, a project to integrate environmental criteria in future Request for Proposals (RFPs) is underway. The goal of this initiative is to ensure suppliers provide more environmentally friendly health care products, such as those with less packaging, better production processes and less waste.



Engagement: Working Together

Climate Resilience - Managing Risks

With a changing climate, we expect to see effects such as more frequent and extreme events such as: flooding, forest fires, ice-and-wind storms, dry land and warming winters. Our ability to support health services over time is dependant on our facilities being able to operate under different climate conditions.

As a first step toward building resilience and knowledge across our organization, a climate change vulnerability assessment was piloted at Golden and District Hospital. Key departments such as Facilities Management and Operations, the Office of the Medical Health Officer, Emergency Management, Support Services, Aboriginal Health, Pharmacy, Nursing Administration, Enterprise Risk Management and our Health Services Administrator identified potential future vulnerabilities to this site, and shared the outcomes with key stakeholders across IH. This exercise identified areas to build capacity and preparedness in order to remain operational during events with decreased air quality, increased precipitation, and potential water supply and quality issues.



Participants in climate change vulnerability assessment

Resilient Building Design Guidelines

In collaboration with other health authorities, IH's Capital Planning and Environmental Sustainability teams are participating in a joint initiative to narrow the knowledge gap, translate climate information into guidelines applicable to new construction, major redevelopment, and retrofit projects to inform future infrastructure investments.

Co-Benefit

Risk Management

Employees Plug Sustainability in their Work

Interior Health's Sustainability Associates program supports and encourages individuals, teams and departments to build a culture of sustainability by sharing information and resources, participating in events and programs, and implementing new initiatives. The goal of this program is to foster sustainability across our culture by amplifying the voices of Associates to drive change and reduce our environmental footprint across IH.

Penticton Regional Hospital

Led by Sustainability Associates such as Chantel Au, a Pharmacist, successes continue across the facility to include:

- Elimination of Styrofoam cups on multiple inpatient wards, volunteer water service, and cafeteria;
- Limited access to plastic straws in cafeteria and on volunteer water service;
- Implemented "Green Sticker" recyclable indicator in storage rooms on some inpatient floors;
- Extra signage near recycling receptacles indicating "NO SOFT PLASTICS";
- Brown paper bags instead of plastic for patient items during inpatient stay, on some inpatient floors; and,
- Outpatient chemotherapy now using paper bags instead of plastic.



PRH Sustainability Associates: Chantel Au, Chelsea Chadwick, Dina Hampton

Co-Benefit

Engaged Employees

Influencing for Change

In Celebration of Waste Reduction Week

Brainstorming, identifying and implementing a no-cost process change to reduce waste can be challenging. However, Sustainability Associate Desiree Spenst rose to the challenge and identified a potential process change and enlisted IMIT. She noticed duplication and waste when new computer systems were ordered. Existing systems are packaged and arrive with all components, including a keyboard and mouse, which is not required, resulting in the components moving to a storage facility, rarely to be used.

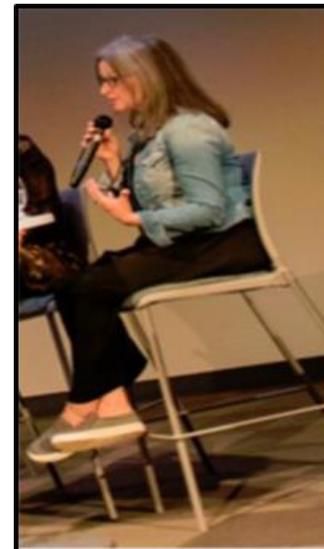
At time of publishing this report, the opportunity continues to be explored. This example highlights how continued collaboration across many departments influences changes having a positive effect on the environment.

Community Engagement

In February 2019, IH's Healthy Communities partnered with the University of British Columbia Okanagan campus and addressed more than 400 attendees about building community resilience to a changing climate. Using temperature projections across the IH region, communications focused on the Heat Alert Response System (HARS) pilot underway to mobilize, communicate and alert communities to be prepared for extreme heat.



KGH Sustainability Associate, Desiree Spenst



Heather Deegan. Director, Healthy Communities



Beyond 2019: Looking forward

Continue to Improve Interior Health's Environmental Footprint

As the 2019 Carbon Neutral Action report illustrates, sustainability action is continuing across many areas of IH. These efforts are critical to changing behaviours, increasing involvement, building a culture that embraces sustainability, and developing sustainable infrastructure. Ultimately, our goal is to do our part and to reduce our impact on the environment and create healthier communities.

Interior Health will expand on efforts to establish policies and practices to better integrate sustainability into organizational decision-making to support existing actions and address areas of opportunity. Efforts to identify ancillary and co-benefits of environmental action and create opportunities to integrate sustainability into key planning activities will continue.

Interior Health will endeavour to find ways to influence change and adopt a whole-of-organization approach whenever possible. The energy and environmental sustainability portfolios will effect action and provide expertise and support, with a goal to strengthen efforts across all departments in IH.

