

UBCM 2023

# BALANCING ~~A~~CT







# Strengthening Communities Fund in Action

Victoria's Safe and Welcoming Neighbourhoods

UBCM – Large Urban Forum



# Victoria's ecosystem of supports



Over 60 social service agencies in the downtown core

Health, mental health, addictions, housing, ID, legal support

Lived and living experience, trauma informed, Indigenous led



# Tiny Home Village

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- ❖ Crowdsourced through Community
- ❖ Repurposed shipping containers
- ❖ Housing for 30 residents located on City parking lot
- ❖ Neighbourhood committee/meetings
- ❖ Grant supported the security, utilities and siting needs



# Temporary Increased City Service Levels

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## Urban Issues Team

- ❖ Additional bylaw and police
- ❖ Peer Outreach to accompany bylaw in field
- ❖ Enhanced cleaning 7 days a week
- ❖ Installation of handwashing stations, portable washrooms
- ❖ 24/7 Mobile security patrols during temporary suspension of enforcement on daytime sheltering in parks (COVID)



# Temporary Service Teams for Unsheltered Homeless Indigenous People

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- ❖ Team consisted of Registered Clinical Counselor, Street Nurse, Youth Outreach Worker and Traditional Health and Wellness Coordinator.
- ❖ Improved the health and safety of unsheltered homeless Indigenous people through the provision of primary care, Counselling and nourishment boxes.
- ❖ Improved the coordination between City, health and social service providers





# Temporary Peer Support Teams



- ❖ Peer Support workers hired for a one-year contract to help transition unsheltered homeless people indoors
- ❖ Connecting people to resources and support programs in coordination with housing and shelter providers

# Development of a Community Inclusion Team

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- ❖ City wide Community Inclusion team was developed to integrate unsheltered homeless people into neighbourhoods
- ❖ Addressed concerns about public health and safety by fostering public dialogue and relationship building
- ❖ Unsheltered, service providers and neighbourhood associations all part of the conversation



ALLIANCE TO END  
**HOMELESSNESS**  
IN THE CAPITAL REGION

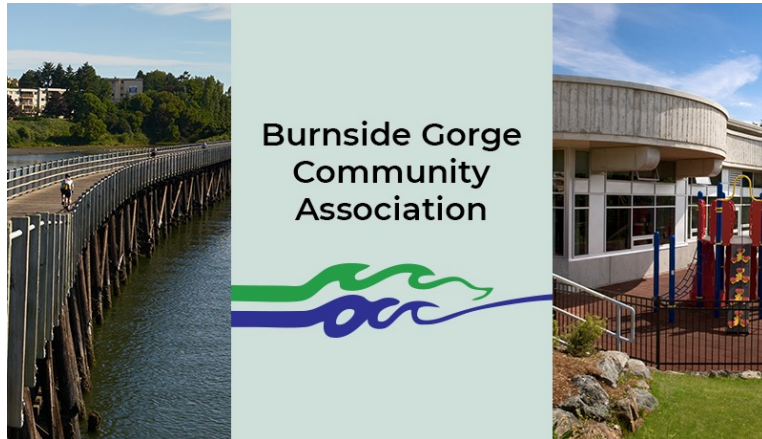




# Pilot Projects in the Burnside Gorge Neighborhoods



- ❖ Neighbourhood home to many of the shelters and supportive housing units
- ❖ Facilitated working group of neighbourhood residents, business owners and unsheltered people



- ❖ Established a peer-based Clean and Safe Team
- ❖ Improved safety and security through a dedicated Crime Prevention Through Environmental Design (CPTED) initiative



An aerial photograph of a coastal landscape. On the left, a dense forest of evergreen trees covers a steep hillside. A paved road follows the curve of the coast, with a small white boat docked at the water's edge. The ocean is a deep blue-green, with a speedboat moving across the water in the lower right, leaving a white wake. The sky is a pale, hazy blue, suggesting a bright day. The overall scene is serene and scenic.

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# Hon. Jennifer Whiteside

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# Strengthening Communities Fund in Action: Peer Assisted Care Teams

**Union of BC Municipalities**

Canadian Mental Health Association – BC Division


Jonny Morris, CEO

**September 19, 2023**

# About CMHA BC

**CMHA Branches in BC**

<b>CARIBOO CHILCOTIN (WILLIAMS LAKE)</b> 250-398-8220   <a href="http://www.cariboo.cmha.bc.ca">www.cariboo.cmha.bc.ca</a>	<b>VANCOUVER-FRASER (VANCOUVER)</b> 604-872-4902   <a href="http://www.vf.cmha.bc.ca">www.vf.cmha.bc.ca</a>
<b>COWICHAN VALLEY (DUNCAN)</b> 250-746-5521   <a href="http://www.cowichanvalley.cmha.bc.ca">www.cowichanvalley.cmha.bc.ca</a>	<b>VERNON</b> 250-542-3114   <a href="http://www.cmhavernon.ca">www.cmhavernon.ca</a>
<b>KAMLOOPS</b> 250-374-0440   <a href="http://www.kamloops.cmha.bc.ca">www.kamloops.cmha.bc.ca</a>	<b>VICTORIA OFFICE (CMHA BC)</b> 250-216-4228   <a href="http://www.victoria.cmha.bc.ca">www.victoria.cmha.bc.ca</a>
<b>KELOWNA</b> 250-861-3644   <a href="http://www.cmhakeLOWna.com">www.cmhakeLOWna.com</a>	
<b>KOOTENAYS (CRANBROOK)</b> 250-426-5222   <a href="http://www.kootenays.cmha.bc.ca">www.kootenays.cmha.bc.ca</a>	
<b>MID-ISLAND (NANAIMO)</b> 250-244-4042   <a href="http://www.mid-island.cmha.bc.ca">www.mid-island.cmha.bc.ca</a>	
<b>NORTH AND WEST VANCOUVER</b> 604-987-6959   <a href="http://www.northwestvancouver.cmha.bc.ca">www.northwestvancouver.cmha.bc.ca</a>	
<b>NORTHERN BC</b> 250-564-8644   <a href="http://www.northernbc.cmha.ca">www.northernbc.cmha.ca</a>	
<b>PORT ALBERNI</b> 250-724-7199   <a href="http://www.cmhaportalberni.ca">www.cmhaportalberni.ca</a>	
<b>SHUSWAP-REVELSTOKE (SALMON ARM)</b> 250-832-8477   <a href="http://www.shuswap-revelstoke.cmha.bc.ca">www.shuswap-revelstoke.cmha.bc.ca</a>	
<b>SOUTH CARIBOO (100 MILE HOUSE)</b> 250-395-4883   <a href="http://www.southcariboo.cmha.bc.ca">www.southcariboo.cmha.bc.ca</a>	
<b>SOUTH OKANAGAN SIMILKAMEEN (PENTICTON)</b> 250-493-8999   <a href="http://www.sos.cmha.bc.ca">www.sos.cmha.bc.ca</a>	



## OUR SUPPORT

- Education & Training
- Service Delivery
- Policy & Advocacy

## OUR REACH

- CMHA operates in BC through the BC division and 14 branches that service over 100 communities to meet local needs.



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# Partners in Transformative Care

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# SHIFTING FROM CRISIS TO CARE IN BRITISH COLUMBIA

Sending mental health responses to mental health emergencies





# Victoria's Peer Assisted Care Team

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**Victoria PACT Team is currently available between  
2pm and 9pm, Monday through Friday.  
The team can be reached at **250-818-2454.****



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# Peer Assisted Care Teams

## Addressing Overburdened Responses

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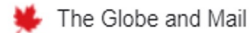
Hundreds rally in Surrey, B.C., as health minister under fire for continued ER closures across province



Emergency departments are in crisis now and for the foreseeable future



Vancouver police budget fight going to B.C. government for review



Ambulance service in B.C.'s Lower Mainland had almost 100 calls in queue waiting for assigned units



Victoria police will cut staff unless council increases budget, chief says





# Peer Assisted Care Teams

## Addressing Overburdened Responses

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When it comes to mental health emergencies police have become the default responders, which has expanded the scope of their work.

1

When it comes to mental health emergencies police have become the default responders, which has expanded the scope of their work.

2

Emergency rooms have become the default place for people to go or be taken, where they often don't get the mental health care they need.

3

The majority of mental health emergencies do not require any sort of police response.

**PACT provides cost effective way to provide mental health care outside of these overburdened systems, in a way that better addresses mental health needs.**



# Peer Assisted Care Teams

## Addressing Individual Distress

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Community-led Initiatives such as PACT focus on alleviating individual distress, so that police resources are freed up to address public safety issues.

Core <u>PACT</u> Duties	Core <u>Policing</u> Duties
Mental health emergency, including suicidal ideation	Preventing and detecting crime
Wellness check on behalf of third party	Keeping the peace
Substance use disorder	Protecting life and property by enforcing laws and apprehending offenders





## Common Scenarios

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A person living in a shelter was acting erratic, clearly suffering a mental health emergency. Shelter staff called PACT.

### PACT Response

The PACT team arrived at the shelter and completed assessments. The person had a history of intense mental health struggles and **decline in their wellness, which led to their inability to access services**. They also had been noted as someone who has a history of escalated behaviour.

**PACT referred this client to Intensive Case Management.** The client was accepted onto the waitlist within the week.

### POLICE Response

If police had attended it would most likely result in the client's anxiety **escalating to violence, criminalized for their behaviour** and subsequent **loss of shelter space**.



## Common Scenarios

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An anonymous caller called PACT regarding a man they saw lying on the street near traffic. The man was responsive, but the caller was concerned for the man's well-being.

### PACT Response

The PACT team says "thank-you for calling, **we will come out and check on him**" team arrive on-site and conduct a wellness check.

The caller says "thanks, I was considering calling the Police **but he wasn't putting anyone else in danger except for himself**"

### POLICE Response

If police had attended, it is a **drain on resources** and an **increase chance for conflict**.





# But when do police need to be involved?

## The early data speaks for itself:

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1

Data from the Vancouver Island Crisis Line from Jan to Aug 2023 shows that only 0.5% of mental health emergencies required 911 escalation.

2

Out of 1118 calls to PACT between Jan and July 2023, only 6 calls (0.5%) required escalation to police due to an imminent safety risk.

3

Of these 1118 calls, police referred to PACT 16 times, with this number increasing steadily as police become aware of PACT and relationships between various emergency responders are being established.

We can look to the Metropolitan Police in the UK as an example...

"The **threshold** for a police response to a mental health-related incident will be to investigate a crime that has occurred or is occurring; or to protect people, when there is a **real and immediate risk** to the life of a person, or of a person being subject to or at risk of serious harm."

– Metropolitan Police Agreement with NHS



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# Peer Assisted Care Teams

## Right Care, Right Person

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### Mental health care as a 4th response



Each emergency has unique expertise to respond to specific needs.



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# PACT is Expanding

## Three New Teams in 2023

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<p><b>North &amp; West Vancouver (North Shore) 2021</b></p>  <p>Canadian Mental Health Association North and West Vancouver <i>Mental health for all</i></p>	<p><b>Victoria 2022</b></p>  <p>AVI Health and Community Services where harm reduction works</p>	<p><b>New Westminster 2022</b></p>  <p>Purpose INSPIRING CHANGE</p>
<p><b>Comox Valley 2023</b></p>	<p><b>Kamloops 2023</b></p>	<p><b>Prince George 2023</b></p>






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**PACT@cmha.bc.ca**

**cmha.bc.ca**





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# Delta COVID-19 Homelessness Response Project

UBCM's Large  
Urban  
Communities  
Forum

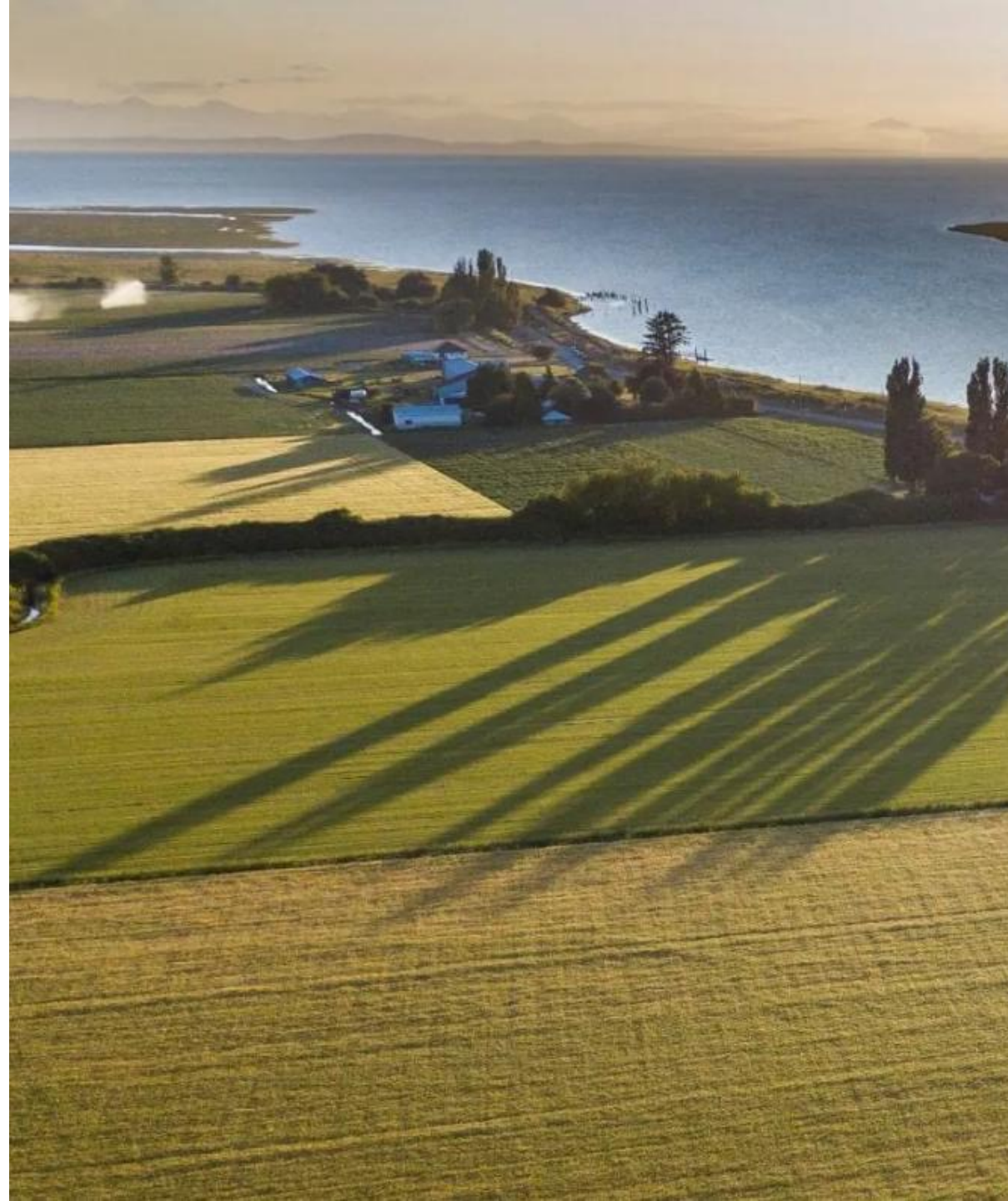
September 19,  
2023

Delta 



# Key Points

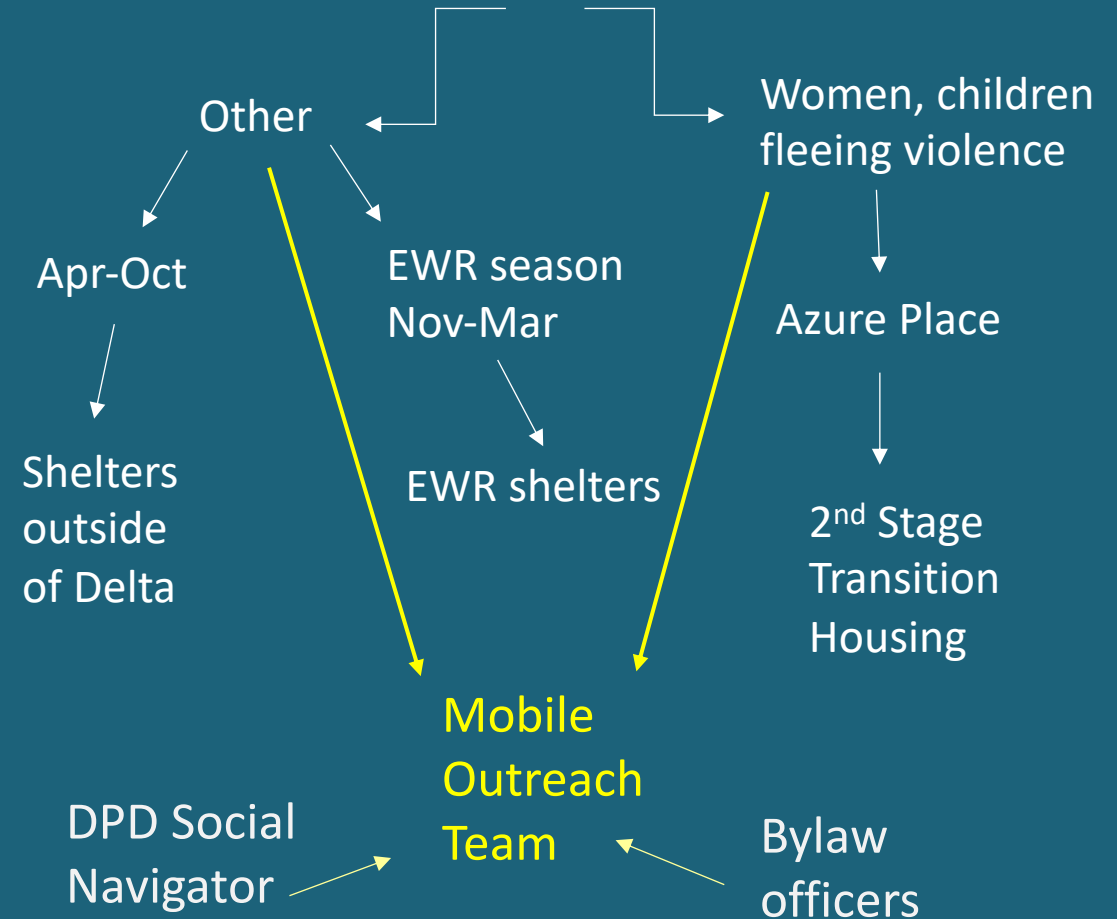
- About Delta
- Homelessness in Delta
- 2021-2023 Projects: Overview
- Mobile Outreach Team
- Resources
- Collaboration
- 2023 initiatives
- Lessons Learned



# About Delta

- Population | 108,000
- Unique geography
- Vulnerable seniors
- Migrant workers
- Increased number of renters
- Services not keeping up with growing needs

## Unhoused individual in Delta



# Homelessness in Delta



## FACES AND PLACES OF HOMELESSNESS IN DELTA

### FINAL REPORT

Delta COVID-19 Homelessness Response Study  
October 2022

Prepared by the Options Community Services Research  
Team with the support of the City of Delta - Social Planning



- 2020 Homelessness count | 17
- UBCM-funded - 2022 Delta's Homelessness Study
- Spectrum of homelessness
- 60 self-identified unhoused individuals | 70% - chronically homeless
- Informed Delta's 5-year Social Action Plan and our activities in 2023-24



# Delta COVID-19 Homelessness Response

## Year 1: 2021-2022

- Study: *Faces and Places of Homelessness in Delta*
- Mobile Outreach Team (MOT) Program

## Year 2: 2022-2023

- Project Advisory
- Services Coordination
- MOT Program – modified
- Food Truck Program
- Public Awareness Campaign
- Training and Educational Sessions
- Staff: Homelessness Coordinator

# Mobile Outreach Team

- 1 outreach worker (OW) working Monday-Friday
- Dedicated office time in North Delta and South Delta
- Since January 1, 2023, the OW has connected with 56 individuals and responded to 52 calls. In the 2022 calendar year, the OW connected with 127 individuals and responded to 23 calls.



# Mobile Outreach Team

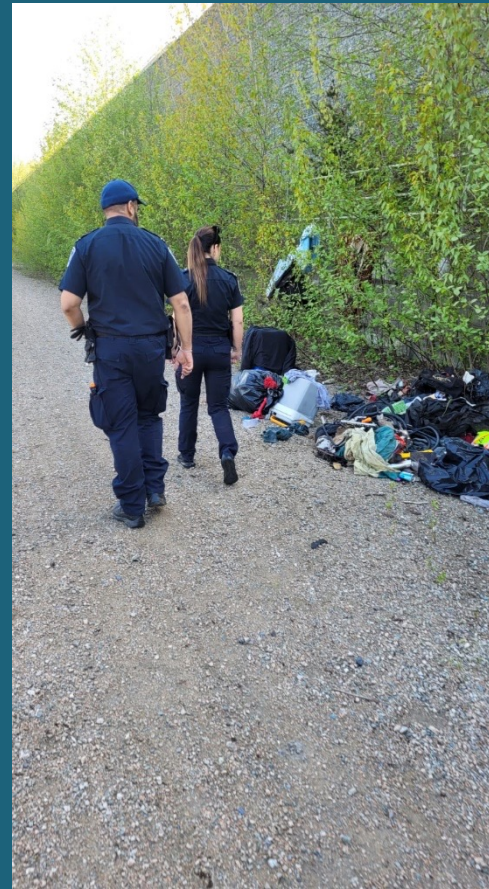
- OW facilitates referrals to our Housing Office team to receive rental subsidies for clients
- OW hands out hygiene kits to individuals in need on the streets
- Provides resources for clients including food, clothing, water bottles, gift cards, emergency care kits





# Mobile Outreach Team

- Attend to encampments with Delta By-Law officers. The encampments are often out of site of the public.
- Provide education and resources to persons experiencing homelessness or the public.
- Offer shelter services for those experiencing homelessness to the Hyland House Shelter in Newton



# Resources

**YOU  
MATTER  
TO DELTA**


Delta

**YOU ARE NOT FORGOTTEN.  
YOU ARE NOT ALONE.  
YOU MATTER.**

Need emergency housing?  
Worried about your next meal?  
Senior and feeling isolated?  
Need help?

This pocket guide provides information about emergency supports and community services in Delta.

*More information on services in Delta is available at [Delta.ca/socialplanning](https://Delta.ca/socialplanning)*

 **NEED SHELTER FOR TONIGHT?**


*There are supports to help you stay warm and safe.*

**NOV 1 TO MAR 31**

There are two Extreme Weather Shelters (EWS) in Delta. These shelters are only open during extreme weather alerts.

**South Delta EWS**  
Ladner United Church (4960 48 Ave, Delta)  
604-599-8900 – call for space  
Public transit (bus): 601 Ladner-Tsawwassen

**North Delta EWS**  
New Hope Church (11838 88 Ave, Delta)  
236-427-3895 ext. 3 – call for space  
Public transit (bus): 319 Scott Station/  
Newton Exchange/Scottsdale

 **NEED ACCESS TO EMERGENCY HOUSING AND OTHER SUPPORTS?**

*Want to know about your housing options, rental subsidies and need some immediate assistance?*

**MOBILE OUTREACH TEAM**

☎ 604-765-6751  
✉ [hylandoutreach@options.bc.ca](mailto:hylandoutreach@options.bc.ca)

**AFTER HOURS EMERGENCY SUPPORTS**

For recipients of income assistance when local ministry offices are closed (emergency need for food, lodging, and transportation):

4:00pm to 12:30am | 604-660-3194  
12:30am to 8:30am | 604-660-4927

# Collaborations

- Options MOW
- Bylaws
- DPD & Social Navigator
- Mobile Outreach Teams
- Local organizations
- Faith community







# Food Truck

- The Phoenix Society
- Contract: March - October
- 2 operation sites
- Promotion
- 704 meals served (March-June)
- Pick up/delivery
- Community feedback

# Training

- Front-line staff
- Key stakeholders in community
- Engagement
- Findings
- Training dates

# Topics

- De-escalation
- Mental Health 101
- Delta Resources

# Awareness Campaign

## Project Advisory Table:

Azure Place  
Ladner United Church (EWS)  
New Hope Church (EWS)  
The Lookout Society  
The Phoenix Society  
Options Community Services  
Deltassist  
Homelessness Services  
Association of BC  
Delta Police Department  
Tsawwassen First Nation  
Fraser Health Authority  
Ministry of Social Development  
and Poverty Reduction  
Ministry of Public Safety and  
Solicitor General

- Interviews in 2022
- Guided by community partners
- Raise awareness about different pathways to being homeless
- Calls for action
- 6 posters, social media campaign
- To be launched during 2023 Homelessness Action Week





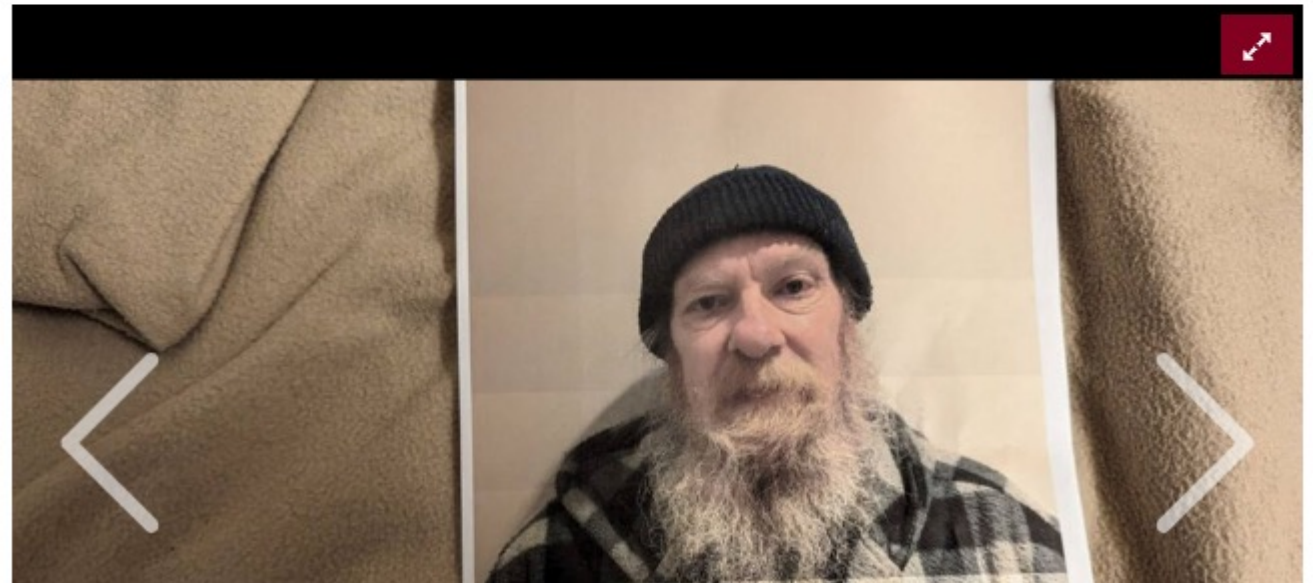
# Lessons Learned

- Awareness of needs
- Collaboration
- Coordination
- Listening & Flexibility
- People with lived experience
- Capacity building
- Delta's Social Action Plan

## Long-time Ladner resident escapes the street, with a little help


Don't be afraid to reach out and ask for help

Phil Melnychuk  
Sep 9, 2023 1:00 PM



Thank you!  
Questions?



An aerial photograph of a coastal road winding along a steep, forested cliffside. The road is paved and has a guardrail. A small white boat is docked at the edge of the road. The water is a deep blue-green color, and a larger boat is visible in the distance. The sky is a pale, hazy blue. The overall scene is serene and scenic.

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# Local Government Climate Action Program

Elaine Cross and Ken Porter  
Climate Action Secretariat  
Ministry of Environment and Climate Change Strategy

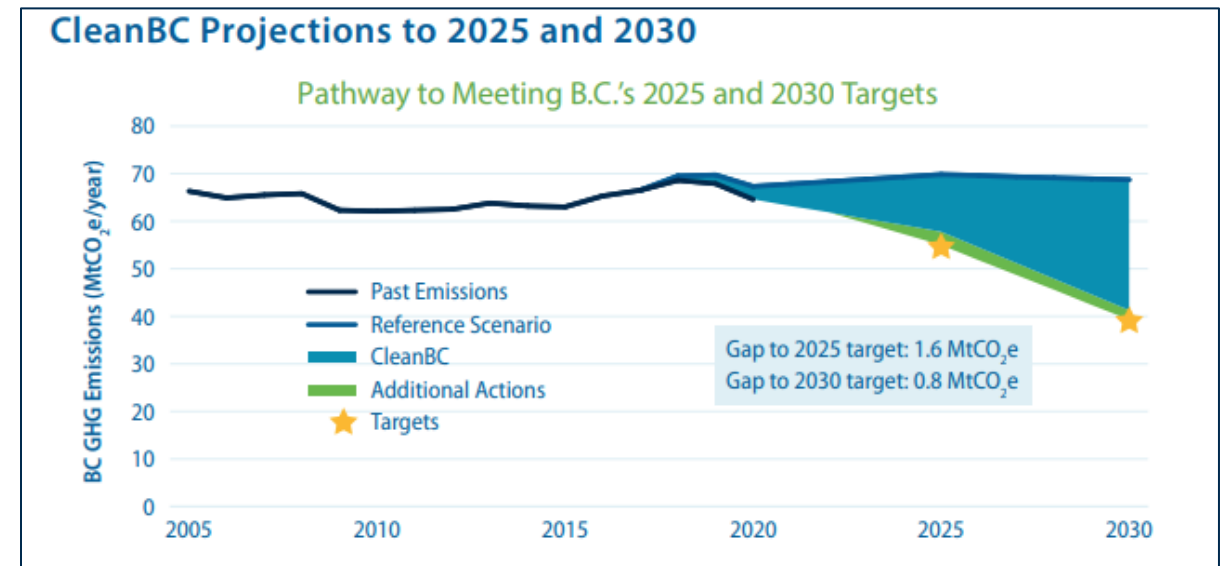
2023



CleanBC  
Roadmap to 2030

# B.C.'s Legislated Targets

- B.C. *Climate Change Accountability Act* sets out legislated targets for reducing greenhouse gas emissions:
  - 40% less than the level of 2007 emissions by 2030
  - 60% less than the level of 2007 emissions by 2040
  - 80% less than the level of 2007 emissions by 2050
- B.C. also established 2030 emission reduction targets for four sectors, with 2007 as the baseline:
  - Transportation, 27-32%
  - Industry, 38-43%
  - Oil and gas, 33-38%
  - Buildings and communities, 59-64%







# CleanBC Roadmap to 2030

- CleanBC Roadmap to 2030 is the plan to achieve 2030 emissions reduction target
- Eight pathways – low carbon energy; transportation; buildings; communities; industry, including oil & gas; forest bioeconomy; agriculture, aquaculture and fisheries; and negative emissions technologies
- Annual reporting for accountability/transparency and to ensure the plan remains responsive
- Collaborative plan based on advice from the Climate Solutions Council



## Climate Preparedness and Adaptation Strategy

Actions for 2022-2025



# Climate Preparedness and Adaptation Strategy

- Four pathways: partnerships, knowledge and decision-making; safe and healthy communities; resilient species and ecosystems; climate-ready economy and infrastructure
- Responsive to 2021 extreme events
- Commits to monitoring and reporting on progress
- Laying the foundation for more comprehensive, long-term climate adaptation efforts in B.C.

# Local Government Climate Action Program (LGCAP)

- Provides flexible, long-term funding that meets urban and rural needs
- Enables community-specific action to reduce emissions and increase climate resilience
- Enables robust reporting to track results and help improve the program over time
- Enables knowledge sharing among local governments and Modern Treaty Nations to promote innovative climate action across the province
- Builds on established partnerships and continues to build new connections

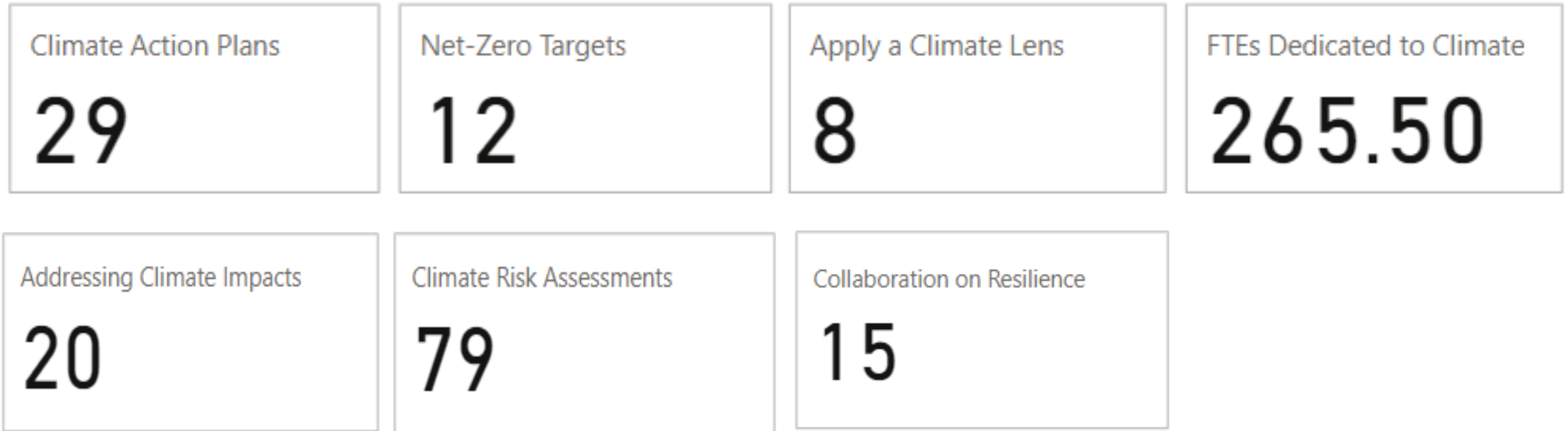


# LGCAP Survey Results - B.C. Overview

Action	Status
Climate action plans	97 communities (18% increase from first year of program)
Net-zero commitments	42 communities
Climate lens application	25 communities
Community-wide GHG emissions	8 communities (69% decrease from 2021)
Corporate emissions reporting	104 communities (100% increase from 2021)
Funding community-wide initiatives	\$0.482 million invested
Funding transportation initiatives	\$1.276 million invested
Funding buildings initiatives	\$1.868 million invested
Risk and vulnerability assessments	79 communities (30% increase from 2021)

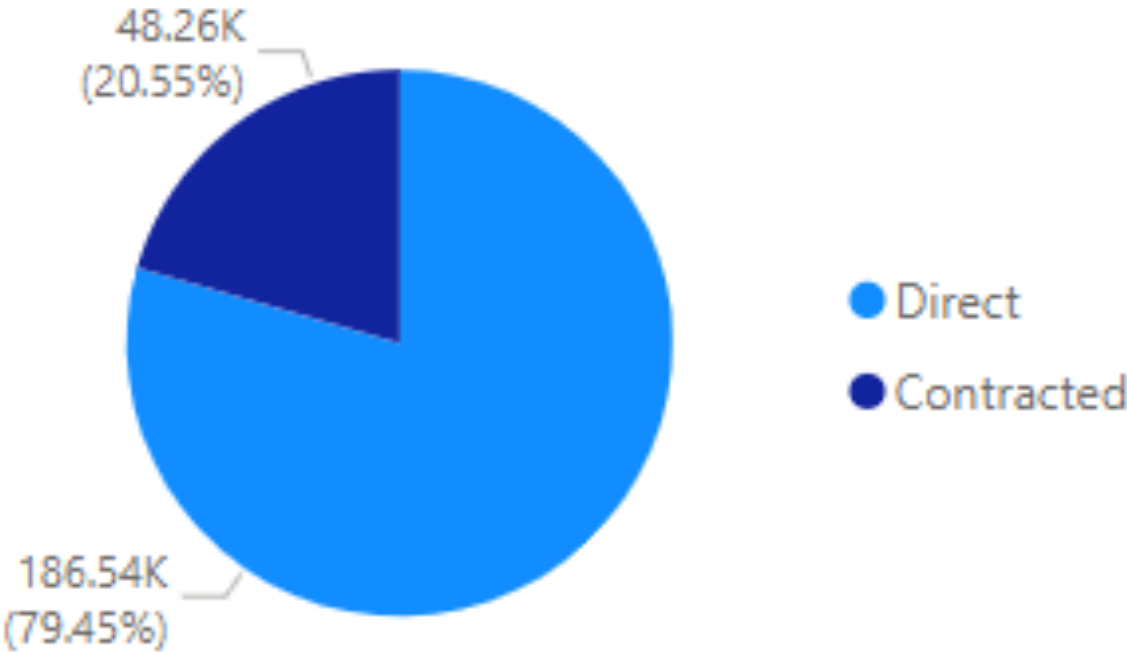


# LGCAP Survey Results - Large Communities

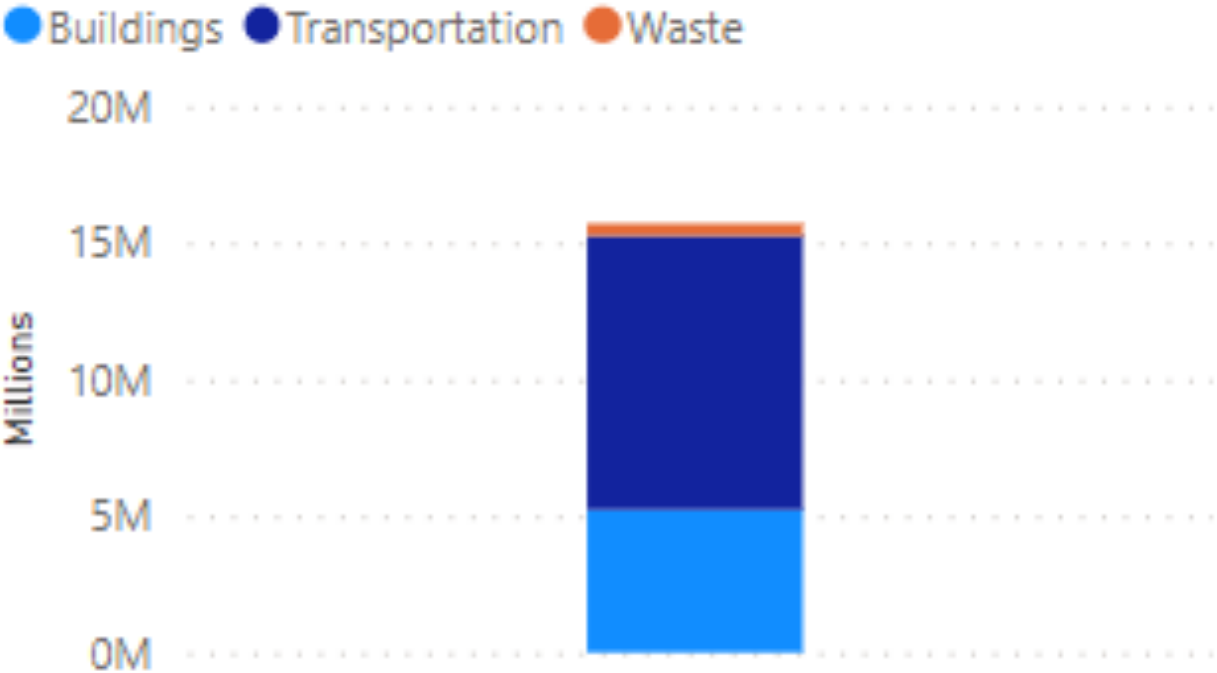


# LGCAP Survey Results - Large Communities

### 2022 Corporate Emissions in tCO2e



### 2022 Community-Wide Emissions in tCO2e



Total Mitigation Investment for 2022

**107.99M**

Total Resiliency Investment for 2022

**65.35M**

Leveraged Funds

**57.16M**

### LGCAP Year One Funding

Initiative	Investment
Put in reserve	\$5,932,051.60
Staffing	\$324,568.86
Buildings	\$710,432.00
Transportation	\$476,161.37
Risk and Vulnerability Assessments	\$214,508.00




# Q&A

[LGCAP@gov.bc.ca](mailto:LGCAP@gov.bc.ca)



CleanBC  
Roadmap to 2030



An aerial photograph of a coastal road winding along a steep, forested cliffside. The road is paved and has a guardrail. A small white boat is docked at the edge of the road. The water is a deep blue-green color, and a larger boat is visible in the distance. The sky is a pale, hazy blue.

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# Working Together to Accelerate Climate Action

SYNERGIES IN LAND USE, TRANSPORTATION, AND CLIMATE ACTION PLANNING

Conor Reynolds

Director, Air Quality and Climate Action

Union of BC Municipalities, September 2023

**metro**vancouver





metrovancouver

23 Member Jurisdictions

2.8 Million Residents

53% of BC population







Climate change is here and now





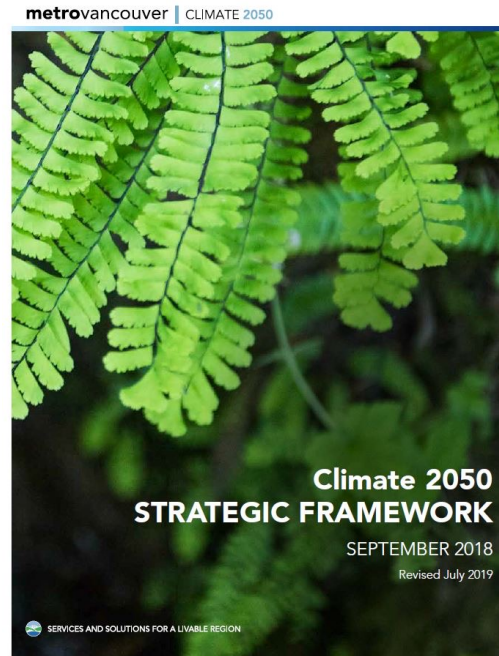
# COORDINATED CLIMATE PLANNING IN THE REGION



Metro 2050



Transport 2050



Climate 2050



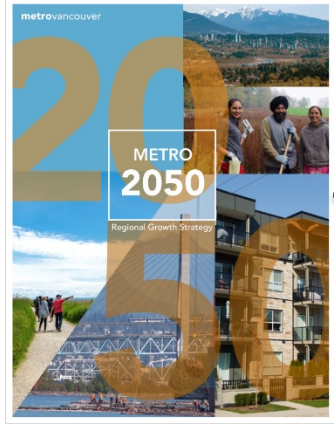
Clean Air Plan



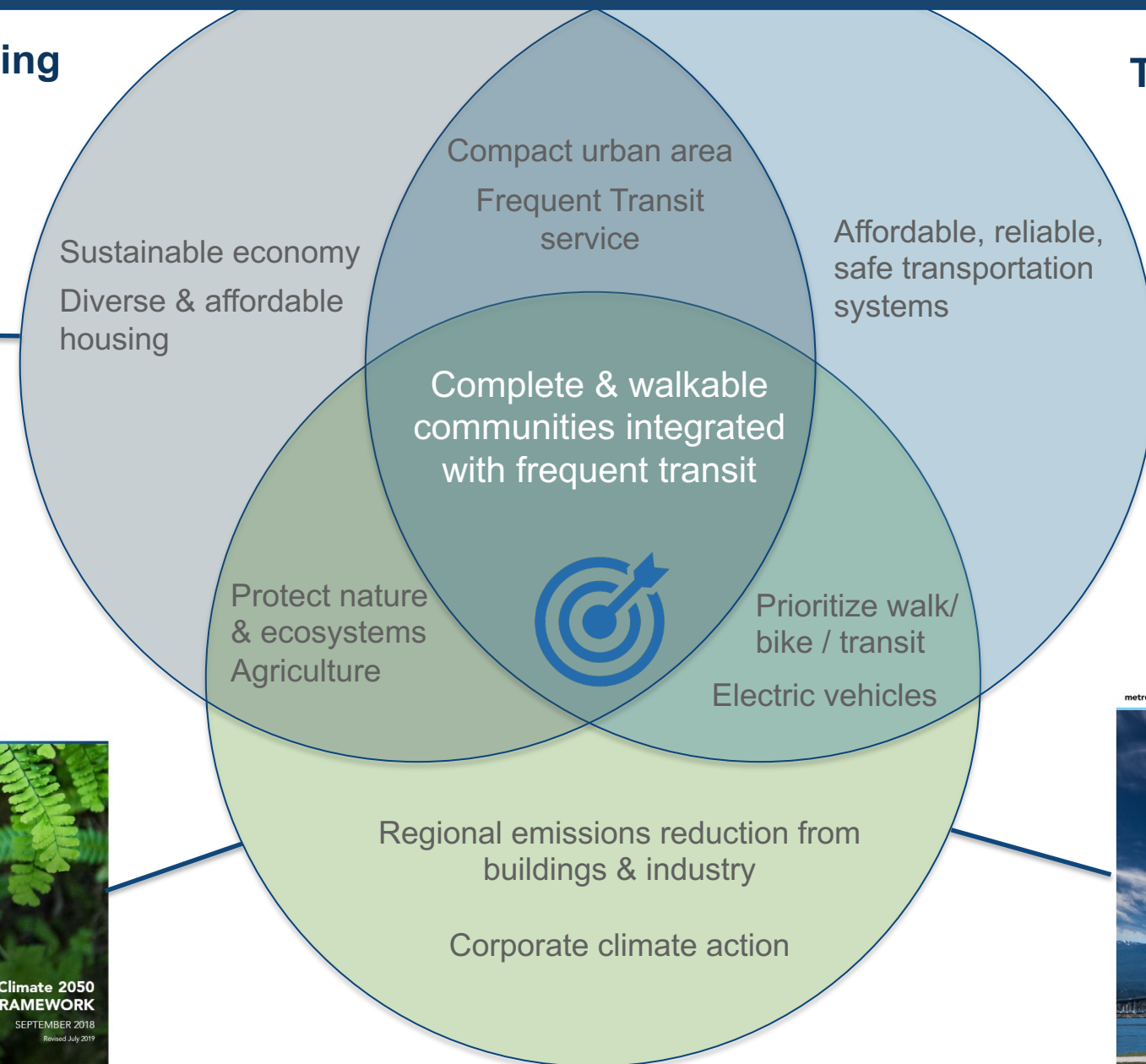
All plans commit to a 45% GHG reduction by 2030 and a Carbon-neutral Region by 2050



# Land Use Planning



# Transportation Planning



# Climate & Air Quality Planning

# IMPROVING RESILIENCE

Integrated land use planning supports resilience by:

- Protecting ecosystems
- Enabling more cost-effective infrastructure
- Discouraging new development in areas vulnerable to natural hazards / climate impacts





# REDUCING EMISSIONS

- Reduced distances to travel = reduced vehicle emissions
- Complete, mixed-use neighbourhoods = easier to get around without need for a car
- Facilitates low-carbon goods delivery
- Increased development density supports efficient and frequent transit
- Energy-efficient buildings = reduced building emissions





# LAND USE + TRANSPORTATION + CLIMATE PLANNING

= More people can meet daily needs close to home & connected by frequent transit

- More intact ecosystems protected
- Improved health and well-being
- More vibrant commercial areas
- Affordable and energy-efficient housing
- More efficient utility and transit investments





# HEALTH BENEFITS

Compact, walkable neighbourhoods with access to green spaces improve public health

- Increased walking & a 17% higher likelihood of meeting the weekly recommended level of physical activity
- 42% reduction in obesity
- 27% reduction in diabetes
- 14% reduction in heart disease
- 23% reduction in mental stress
- 24% increase in a strong sense of community belonging

Source: *Where Matters: Health & Economic Impacts of Where We Live*, UBC Health and Community Design Lab, 2019



# VIRTUOUS CYCLE OF LAND USE & TRANSPORTATION

## Metro 2050 Targets



↑ (%) growth - homes & jobs - in Frequent Transit Development Areas and Urban Centres



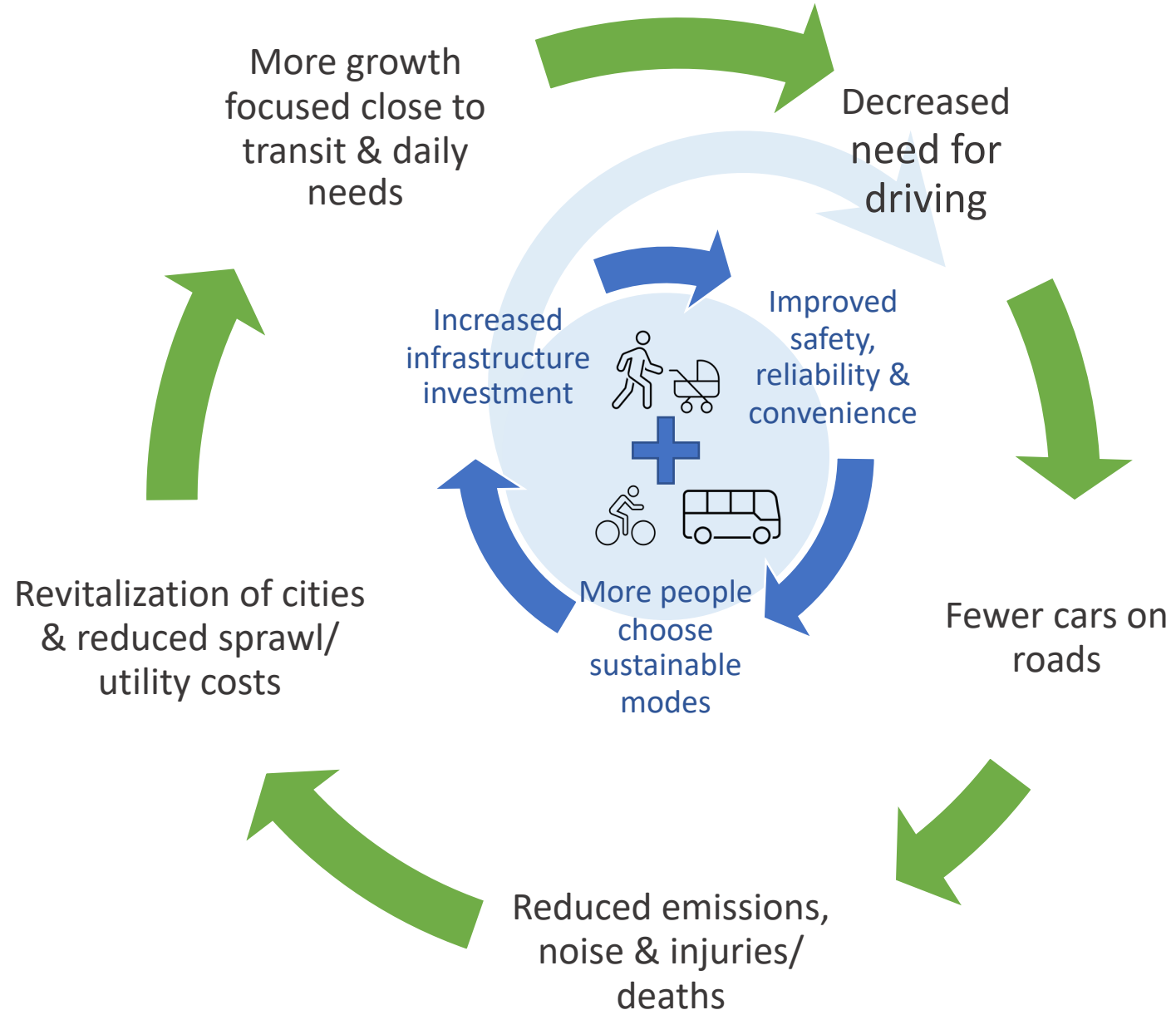
Protect **50%** of land for nature



Achieve **40%** tree canopy cover within urban areas



45% GHG reduction by 2030; carbon-neutral region by 2050





# MOVING FORWARD: COLLABORATION

- Continue to work together as a regional federation & with partners
- Coordinate local, regional & provincial climate policy
- Share best practices for climate action, learning
- Partnerships and advocacy for Provincial and Federal climate policy
- Ensure accountability, tracking and reporting against targets



# PROPOSED MV REGULATORY APPROACHES

## Driving Down Emissions

- Joint project between Metro Vancouver and TransLink
- Project will identify **how** to bundle the policies in adopted plans to reduce GHG emissions from passenger vehicles by **65% by 2030**, from 2010 levels.

## Large Existing Buildings

- Fills a regulatory gap
- Large existing commercial buildings >25k SF: reporting GHGs, phased-in GHG limits
- Project will address the single largest opportunity to reduce building emissions in the region



These two projects are critical to get the region on track to achieve 2030 and 2050 targets






**TOGETHER**  
WE MAKE OUR REGION  
**STRONG**

Thank you

**metrovancouver**



An aerial photograph of a coastal road winding along a steep, forested cliffside. The road is paved and has a guardrail. A small white boat is docked at the end of the road. The water is a deep blue-green color, and a larger boat is visible in the distance. The sky is a pale, hazy blue. The overall scene is serene and scenic.

UBCM 2023

# BALANCING ~~A~~CT





# Downtown Renewable Energy System

Presented by:

Wil Wedel, Manager of Development Services



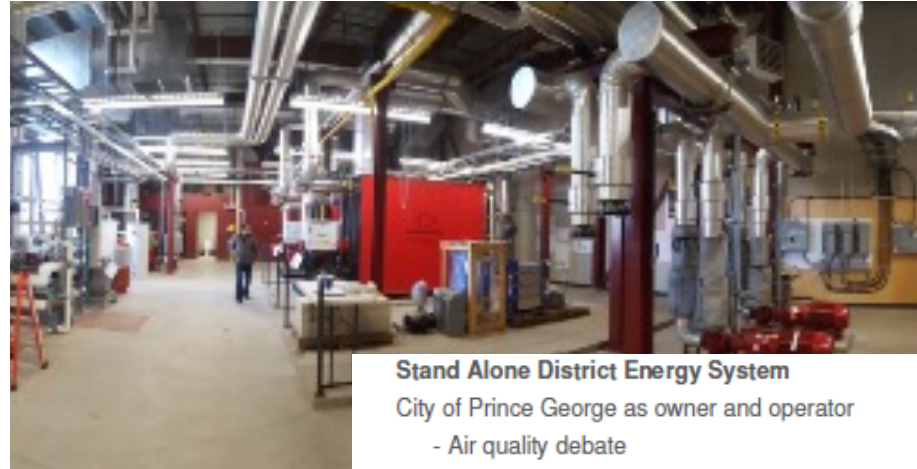
# What is DRES compared to DES

- DES – District Energy System
  - Energy system provides heat to multiple buildings via underground pipe network.
  - Energy can be from any number of sources including geothermal, electric, gas, waste, biofuel.
- DRES – Downtown Renewable Energy System
  - Source of energy is from a renewable source – wood fibre at Lakeland Mills (partnership);
  - Lakeland burns this material to supply heat for their purposes, City uses the remaining energy as primary source of heat.



# DRES Timeline

<b>The Big Idea</b>	2000
<b>The Funding Began and Feasibility Study Completed</b>	2000
- FCM Green Municipal Fund	
<b>Unsolicited Proposal - Marriage Failed</b>	2002
- Greenbelt Renewable Energy Inc—Combined Heat & Power	
- BC Hydro Green Call	
<b>More Funding</b>	2002
- FCM Green Municipal Fund	
- FVB Energy Inc. completes an Enhanced Feasibility Study	
<b>Request for Expression of Interest</b>	2004
- 2 parties express an interest- one is chosen	
- Financial considerations of partner cancel project	
<b>Stand Alone CES Concept Updated</b>	2005
- FVB Completes a Full Scale and Phased Study	
<b>A Number of Partners to Choose From</b>	2006
- Council makes the decision to move forward with one partner for a full scale project—Partner pulls out of project	



## Stand Alone District Energy System 2007

- City of Prince George as owner and operator
- Air quality debate
- Council approves a motion to stop the construction of the stand alone energy plant

## Industry Partnership for Heat Supply 2008-2009

- Use existing industrial heat source
- Net improvement to air quality
- MRIF funding pursued for District Energy System using an Industrial Heat Source
- Looked at two local industries that could supply the thermal energy required and provide the necessary air quality improvements
- Created Communication Plan

## Partnership Creation with Lakeland Mills and Approval by Council 2010

- Alternative Approval Process Initiated and Environmental Assessment, including stakeholder and public meetings
- Energy supply agreement with Lakeland Mills
- Planned to Install hot water piping from the mill site to the downtown
- Existing site will be modified and Energy Transfer Station to be built at Lakeland
  - Pollution Control System—Electrostatic Precipitator to be installed
  - Net improvement to air quality

## Construction Begins 2011

## System Commissioned 2012





# Primary Heat Source

Lakeland Mills boiler provide up to 13 MW<sub>t</sub> of energy for industrial purposes and DRES.

Contract between City and Lakeland for 5.0 MW<sub>t</sub> to be available.

Peak City energy demand has been just over 3.0 MW<sub>t</sub> to date.



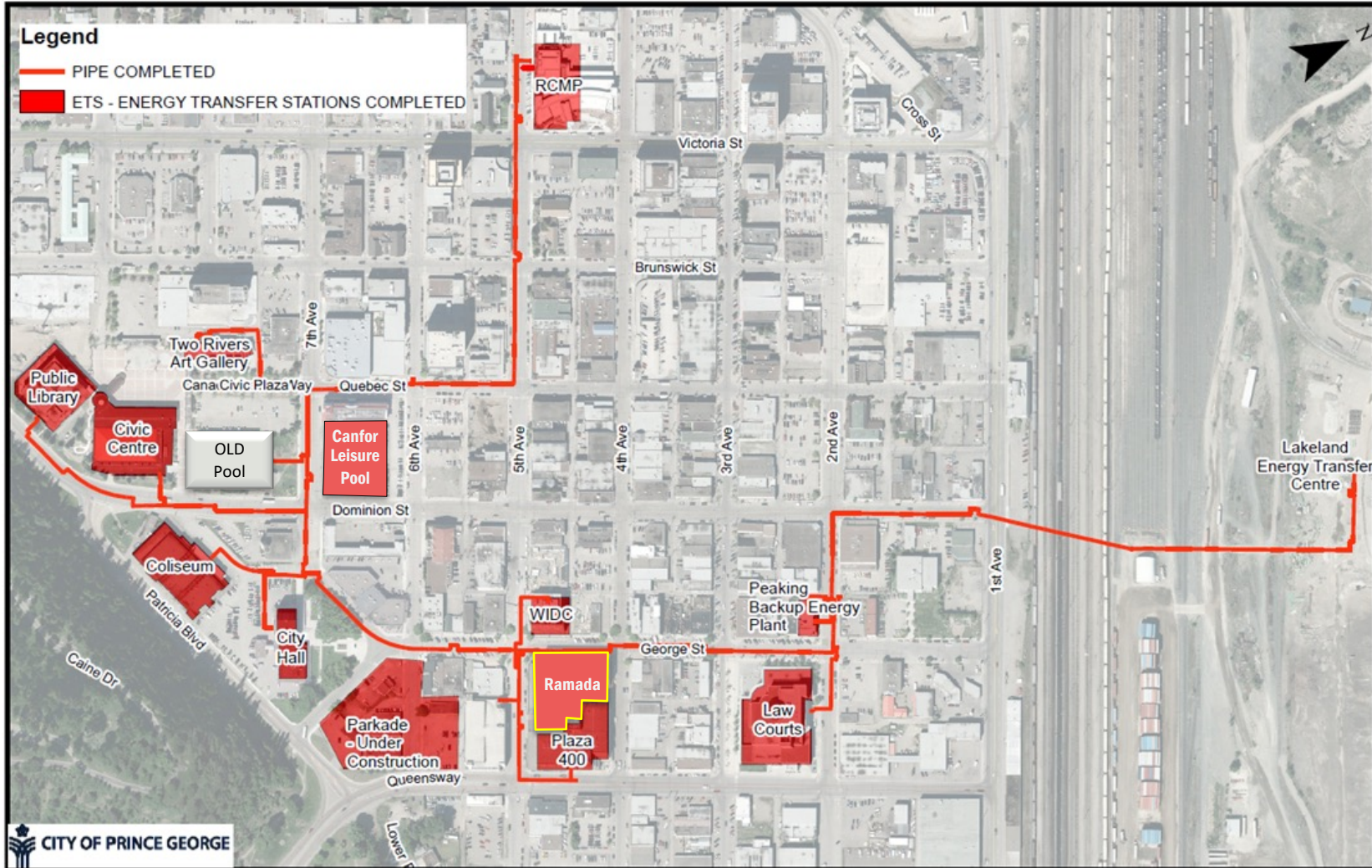
# Peaking/Backup Plant

- City maintained – monitors entire system
- Has two 2.5 MW<sub>t</sub> natural gas backup boilers
  - One is always in circulation, on standby;
  - Can supplement heat or provide full heating demand;
  - One is locked out – 2 boilers requires Power Engineer
- Circulation pumps
  - move heat - Lakeland loop – can isolate
  - move heat - distribution system





# DRES System – Current Connections



1. DRES Building  
(plant and office spaces)
2. Law Courts
3. Plaza 400
4. Wood Innovation  
Design Centre
5. Ramada Hotel (Private)
6. George Street Parkade
7. City Hall
8. Kopar Memorial Arena  
(Coliseum)
9. Canfor Leisure Pool
10. PG Conference and  
Civic Centre
11. Public Library
12. Two Rivers Art Gallery
13. RCMP Detachment

# Environmental Benefits

- Air Quality improvements – GHG reduction

Total Reduction	Equivalent
1,868 tonnes/yr	Energy used by 6 highschoools

- Thermal delivery efficiency
  - Boiler – efficiency drops off over time – from 80% down to 60% efficiency
  - DRES – as high as 95% efficient. Constant energy flow.



# Environmental Benefits

## Particulate Matter Total Reduction

Source	Pre - DES Construction	With DES	Reduction
Lakeland Energy System	37.4 tonnes/yr	6.7 tonnes/yr	30.7 tonnes/yr
Truck Traffic	70 tonnes/yr (approx. 300)	0 tonnes/yr	70 tonnes/yr
<b>NET</b>	<b>107.4 tonnes/yr</b>	<b>6.7 tonnes/yr</b>	<b>100.7 tonnes /yr</b>



\*\* The above truck traffic numbers use emissions estimates as calculated by MOE in the Prince George Air Emissions Inventory-Background Report (2001)

# Safety

DRES System	Boiler System
Heat exchanger onsite.	Pressure vessel inside building.
No permit required by property owner. Covered by DRES.	Permit required for operation.
Building operator not required to have certified operators. Maintenance by City.	Certified operators required for operation and maintenance of boilers.
No combustion onsite, only hot water.	Combustion of fuel – potential for exhaust and fuel leaks.



# Public Reporting



2022  
ANNUAL  
REPORT

The Canfor Leisure Pool project reached completion in fall 2022. Construction began in June 2020 after residents voted in 2017 to replace the Four Seasons Leisure Pool. At over 50 years old, the Four Seasons was at the end of its service life. The new pool is the latest civic facility to connect to the City's Downtown Renewable Energy System, which means it emits 84 per cent less greenhouse gas emissions than if heated by natural gas. The new pool features accessibility improvements and recreational features that cater to visitors of all ages and abilities.



## 2022 Reporting

Fuel Type	Emissions (tCO2e)
Natural Gas	2960
Propane	33
DRES	89
Hydro	330
Gasoline	783
Diesel	2405



### DOWNTOWN RENEWABLE ENERGY SYSTEM

The single greatest contributor to reducing the City's corporate GHGs has been the installation of the Downtown Renewable Energy System (DRES). Operational since 2012, the system distributes hot water through underground piping to eleven buildings in the downtown area, including City Hall, the pool and arena, the library, the art gallery, and the Provincial Court House and Plaza 400 building, almost completely offsetting their natural gas consumption for heat. The hot water is produced at Lakehead Mills using wood chips and shavings that are by-products from lumber production; this "wood waste" might have previously been burned in beehive burners. The use of the system reduces the City's corporate GHGs by approximately 1,500 tonnes per year.

The fuel source is local, renewable, and carbon-neutral. Prince George is one of only a handful of municipal district energy systems in Canada that uses renewable resources as its primary source of energy. Even through extremely cold temperatures, the City's DRES has proven to be a reliable fuel source. In addition, the system contributes to improved air quality, strengthens industry sustainability through partnerships, ensures energy dollars remain within the community, and generates new non-tax revenue.

Figure 6 - Map of City of Prince George Downtown Renewable Energy System, indicating most of the distribution piping network and connected buildings.



\$10 million grant from Province and Federal Governments due to being connected to the DRES.

# Media Exposure



**CANADIAN BIOMASS**

MENU NEWS FEATURES VIDEOS EVENTS PELLET MILL MAP MAGAZINE

## 'A complete circle': Prince George proves district energy can work in Canada

For years now, members of the Canadian biomass industry ...

August 17, 2020 By Ellen Cools

## -44 degrees no problem for City Bioenergy System

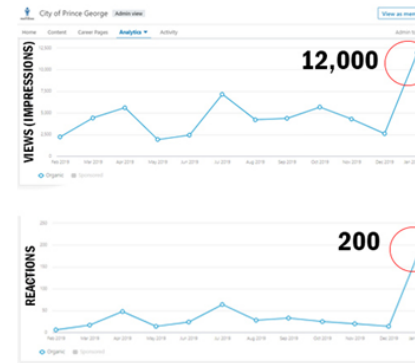
Posted on Wednesday, January 22, 2020 09:31 AM

Through extremely cold temperatures last week, the City of Prince George's Downtown Renewable Energy System operated at its highest level ever – and may have set a new standard for Canada in the process.

The **Downtown Renewable Energy System** distributes...

Like 195 Tweet

### SOCIAL MEDIA EXPOSURE AND ENGAGEMENT



#### LINKEDIN

- The story has reached more people on LinkedIn than any other City LinkedIn post to date. The graph at left (top) shows that views of the City LinkedIn page over the past year peaked in conjunction with the DRES story. Not only did the article reach a large number of people, but it prompted "reactions" (shares, likes, comments) at a level that has been unprecedented for the City LinkedIn page.
- The second graph shows how this activity over the past year again peaked in conjunction with the post about the DRES. Many of the reactions to the story came in the form of shares/likes from governments, public institutions, companies, and industry associations. These included FCM, the Government of BC Trade and Investment Office, the BC Climate Action Toolkit, the Government of Ontario, Universities (Guelph, Toronto, Saskatchewan, and the UBC Biomass and Bioenergy Research Group), CNC, NDTI, Pinnacle Renewable Energy, Confex, and Enbridge.



# Contacts

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City of Prince George

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[www.princegeorge.ca/dres](http://www.princegeorge.ca/dres)

The screenshot shows the City of Prince George website. At the top left is the City of Prince George logo. To the right is a navigation bar with links for 'Online Services', 'A A A', 'Select Language', and a search box. Below this is a secondary navigation bar with links for 'Move Up PG', 'City Services', 'Parks & Recreation', 'Community & Culture', 'Business & Development', and 'City Hall'. The main content area features the title 'Downtown Renewable Energy System' and a breadcrumb trail: 'Home / Community & Culture / Environment & Sustainability / Downtown Renewable Energy System'. There are 'Print' and 'Share' icons. On the left is a 'Community & Culture' sidebar menu with items: 'Prince George Playhouse', 'Your Community & Events', 'Heritage', 'Libraries', 'Environment & Sustainability' (expanded), and 'Trees & Urban Forests'. On the right is a photograph of a building with a sign that reads 'DOWNTOWN RENEWABLE ENERGY CENTRE'.



An aerial photograph of a coastal road winding along a steep, forested cliffside. The road is paved and has a guardrail. A small white boat is docked at the edge of the road. The water is a deep blue-green color, and a larger boat is visible in the distance. The sky is a pale, hazy blue. The overall scene is serene and scenic.

UBCM 2023

# BALANCING ~~A~~CT



# Nanaimo Extreme Heat Mapping, Assessment, and Planning

*Report Summary*

## Extreme Heat in 2021

- 619 heat-related deaths in the province
- 55 of which occurred on Vancouver Island
- 11 within the City of Nanaimo





# NEH Project Purpose

1

Conduct community engagement to research the social conditions of heat risk

2

Map neighbourhoods and locations disproportionately at risk

3

Research best practices for extreme heat responses from other communities

4

Make recommendations for reducing heat risk in Nanaimo

# Heat Vulnerability Factors

Older adults living alone or in isolation

- (65+; 55+ for Indigenous Peoples)
- 24.6% of city population is 65+

Have a chronic mental or physical health condition

- Assumed as a possible factor of the elderly population

Those who use substances

- Large homeless population in Nanaimo, a high percentage of which self-report substance use
- Also discernable in the housed population

Living with a disability

- Assumed as a possible factor of the elderly population

Low-income renters

- Pre-1980 rental building stock prevalent in Nanaimo
- Cooling infrastructure is rare in these building types



## Community-reported Barriers

Accessing online communications

Perceptions of trust and safety

Declining health during COVID/ compounding medical conditions

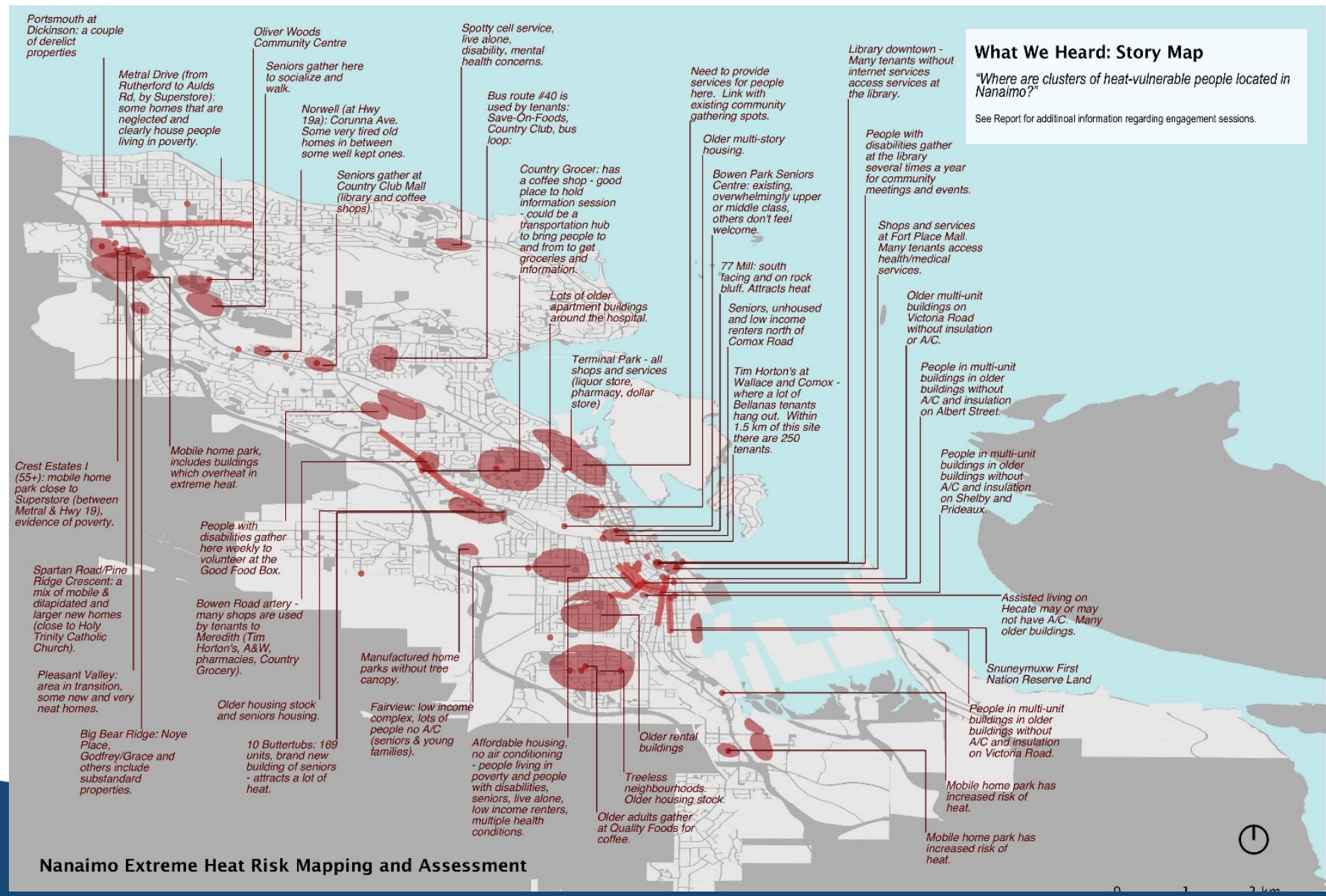
Public transportation safety perceptions

Experiences of discrimination in accessing indoor spaces

Tenant-landlord/strata relationships

Financial barriers

# What we heard: Story Map

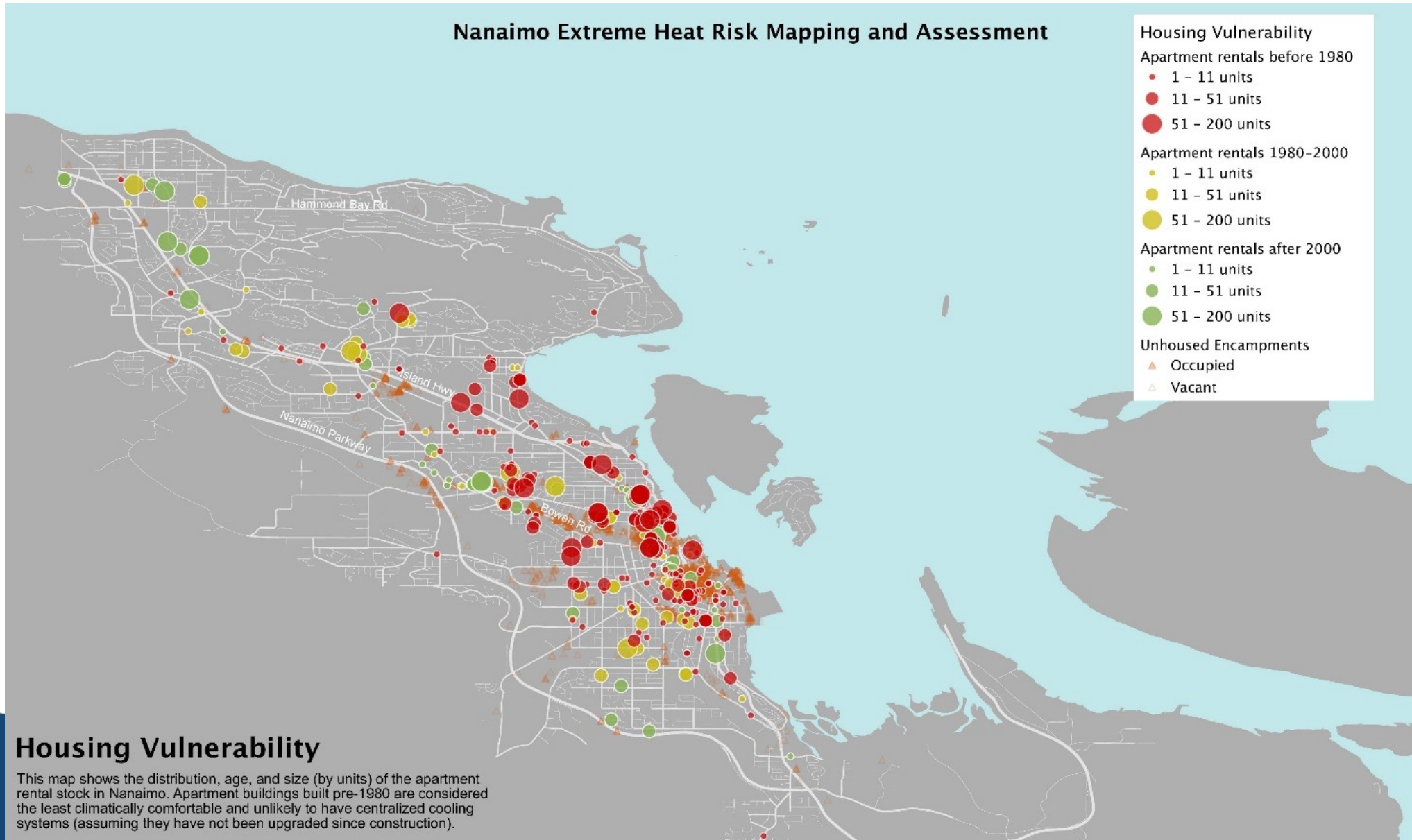


Nanaimo Extreme Heat Risk Mapping and Assessment



# Housing Vulnerability

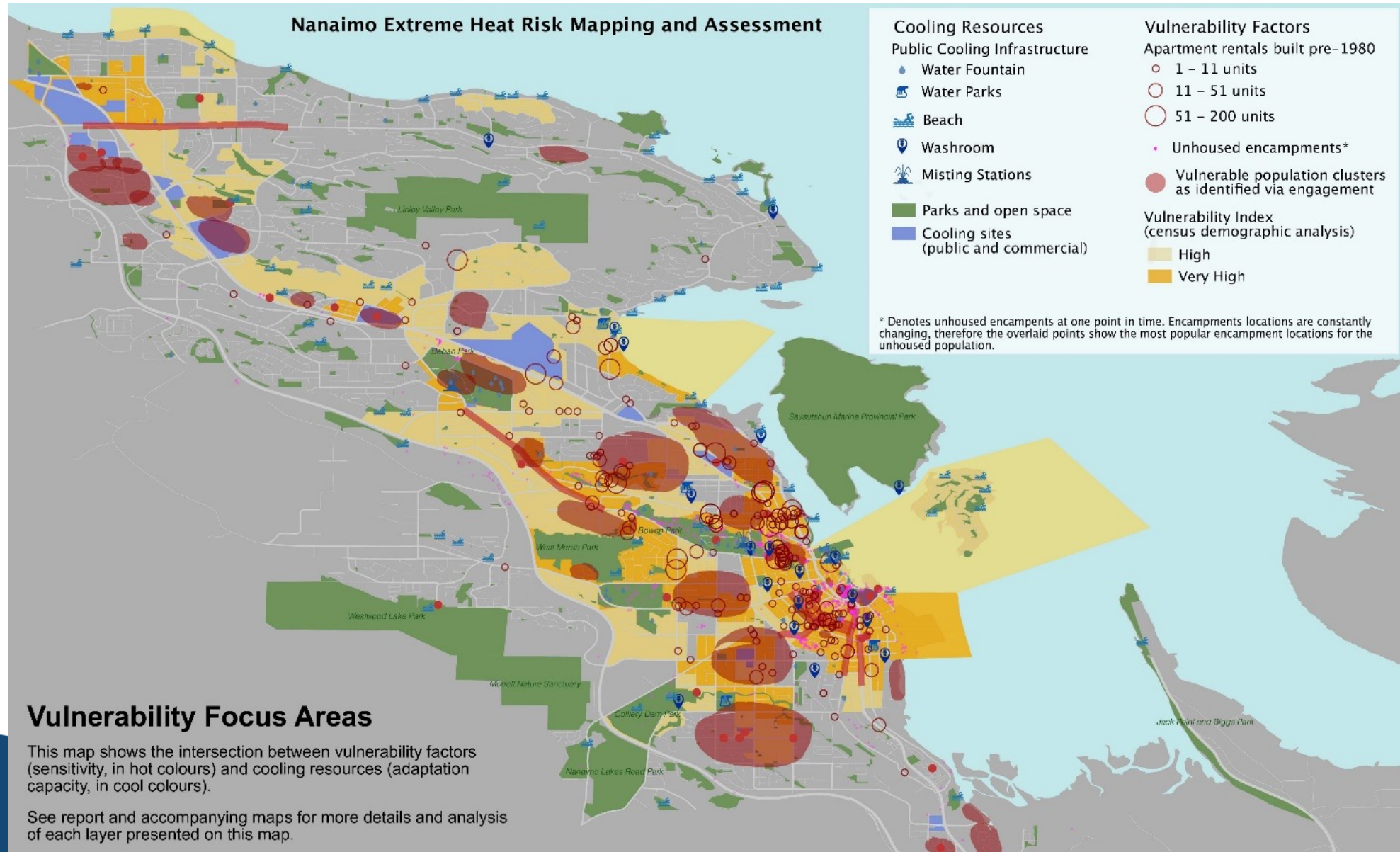
## Nanaimo Extreme Heat Risk Mapping and Assessment



### Housing Vulnerability

This map shows the distribution, age, and size (by units) of the apartment rental stock in Nanaimo. Apartment buildings built pre-1980 are considered the least climatically comfortable and unlikely to have centralized cooling systems (assuming they have not been upgraded since construction).

# Vulnerability focus areas






# Recommendation 1: Improve communications for heat response

- I. Collaborate with Snuneymuxw First Nation (SFN)
- II. Encourage neighbour-to-neighbour resiliency;
- III. Provide communications and public-facing mapping in diverse formats and languages;
- IV. Leverage existing trusted connections; and
- V. Identify community champions and informal gathering spots.

## HEAT RELATED ILLNESS

<p><b>HEAT EXHAUSTION</b></p> <p><b>SIGNS</b></p> <ul style="list-style-type: none"> <li>• Cold, pale, and clammy skin</li> <li>• Heavy Sweating</li> <li>• Fast, weak pulse</li> <li>• Muscle cramps</li> <li>• Headache, dizziness</li> <li>• Nausea or vomiting</li> <li>• Tiredness or weakness</li> <li>• Fainting</li> </ul> <p><b>WHAT TO DO</b></p> <ul style="list-style-type: none"> <li>• Move to a cool place</li> <li>• Loosen tight clothes</li> <li>• Put cool, wet cloths on the person's body</li> <li>• Take a cool bath</li> <li>• Sip water</li> </ul> <p><b>Get medical help if:</b></p> <ul style="list-style-type: none"> <li>• The person is throwing up</li> <li>• Symptoms get worse</li> <li>• Symptoms last longer than 1 hour</li> </ul>		<p><b>HEAT STROKE</b></p> <p><b>Heat stroke is a life threatening medical emergency</b></p> <p><b>SIGNS</b></p> <ul style="list-style-type: none"> <li>• High body temperature (103°F or higher), hot, red, or dry skin</li> <li>• Absence of sweat</li> <li>• Fast, strong pulse</li> <li>• Headache</li> <li>• Dizziness</li> <li>• Nausea</li> <li>• Confusion</li> <li>• Losing consciousness (passing out)</li> </ul> <p><b>WHAT TO DO</b></p> <ul style="list-style-type: none"> <li>• <b>Call 911 immediately</b></li> <li>• Move the person to a cooler place</li> <li>• Help lower the person's temperature with cool cloths or a cool bath</li> <li>• <b>DO NOT give the person anything to drink</b></li> </ul>
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**RESOURCES**

For additional resources, please visit [www.preparedbc.ca](http://www.preparedbc.ca), where you can learn about how to prepare for, respond to and recover from the top hazards in BC, such as wildfires, floods, and earthquakes.

**In an emergency, call 9-1-1**

**Community Social Planning Council**  
Insights Dialogue Solutions

# Recommendation 2: Provide information on in-home heat relief

- I. Maps of heat-relief locations outside of the home;
- II. Simple tips and tricks for at-home cooling;
- III. Information about reducing financial barriers to enable in-place heat relief.

**HOW TO KEEP COOL AT HOME WITHOUT AIR CONDITIONING**

**NO COST**

**Reduce Indoor Heat during the day**  
Close window(s) and curtains or blinds to shutout the sun and heat. If you are in a poorly insulated house, closing windows could make it hotter. If you need to open a window, try placing a fan blowing outside to allow warm air out of your house instead of drawing hot air in.

**Cool house at night**  
Open window(s) at night to allow cool air inside. Put a fan by the window facing in to blow air into the house when the temperature is cooler outside. Use fans (including kitchen & exhaust fans) to circulate cool air.

**Use your fans wisely**  
Set your ceiling fans to rotate counterclockwise and place a bowl/tray of ice in front of a fan. Do not use a fan when the indoor air temperature is over 35°C (95°F). Using a fan can be more harmful than helpful when indoor air temperatures are hotter than your body temperature.

**Check with your neighbours, family, friends and those at risk**  
If you live alone, find a heat-buddy to check in on you and take you to cooling centres or help you with cooling measures at your residence. Check in on your heat-buddy and neighbours multiple times a day, especially homebound individuals or people who live alone.

**Minimize indoor heat production**  
Turn off unused appliances. Cook food in a microwave rather than oven. Dry clothes on a patio or a small drying rack inside.

**Cool your body**  
Wear cool, loose clothing. Use water-soaked cloths or cooling packs on your neck and wrists. Sit in or put legs in a cool (not cold) bath. Take a cool shower to draw heat from your body. Plan for modified working, living and sleeping arrangements.

communitycouncil.ca



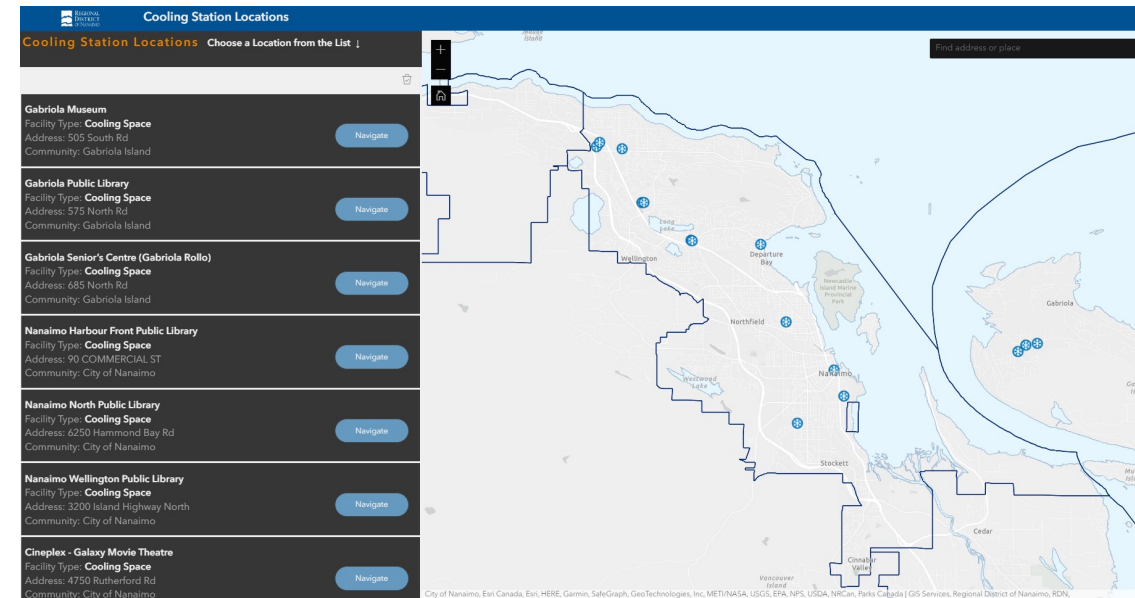
# Recommendation 3: A spatial approach to heat relief planning

- I. Respond to potential updates to the BC Building Code;
- II. Invest in nature-based solutions, by
  - a. Increasing the tree canopy
  - b. Adding cooling infrastructure
  - c. Providing free accessible transportation
- III. Collaborating with SFN to support re-connecting with natural heat relief outdoors by accessing forests, waterfronts and riparian areas.



# Recommendation 4: Increase adaptive capacity through municipal leadership

- I. Extending hours of operations for public buildings as places of refuge;
- II. Providing mobile heat relief hubs
- III. Trialing pilot projects with adaptive learning approaches





# Thank you!

Evan Lloyd  
Emergency Program Manager  
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# Archway for Domestic Peace

In appreciation of our speakers today and with thanks for your contribution, UBCM has made a donation to the Archway Society for Domestic Peace. The Archway Society provides a wide range of supportive services for survivors of domestic and sexual violence. Services include; safe shelter, counselling, child and youth advocacy, outreach services, and collaborative community projects.