

# RR-1



CITY CLERK'S DEPARTMENT  
Public Access and Council Services

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## MEMORANDUM

June 30, 2010

TO: Vancouver City Council

FROM: Laura Kazakoff, Meeting Coordinator

SUBJECT: Review of Preparedness and Response Services During Extreme Weather

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Jennifer Standeven, Acting Assistant Director of Business Operations, will provide a Report Reference regarding a Review of Preparedness and Response Services During Extreme Weather.

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# RR-1

## ADMINISTRATIVE REPORT

Report Date: June 7, 2010  
Contact: Jennifer Standeven  
Contact No.: 604.873.7437  
RTS No.: 8348  
VanRIMS No.: 08-2000-20  
Meeting Date: July 6, 2010

TO: Vancouver City Council

FROM: Deputy City Manager, in consultation with the Deputy General Manager of Community Services and Director of Emergency Management

SUBJECT: Review of Preparedness and Response Services During Extreme Weather

### *RECOMMENDATION*

- A. THAT Council adopt the Extreme Hot Weather Preparedness and Response Plan for the City of Vancouver.
- B. THAT Council direct staff to further explore the need and feasibility of purchasing a potable water truck or fabricating additional water stations to provide water to areas of greatest need and/or at events during extreme heat or other emergencies.

### *GENERAL MANAGER'S COMMENTS*

The City Manager supports the submission of this report and the adoption of the Extreme Hot Weather Preparedness and Response Plan.

### *COUNCIL POLICY*

There is no applicable Council Policy for service response during Extreme Hot Weather for vulnerable populations. The City is a member of the Greater Vancouver Shelter Strategy that has established an Extreme Weather Response Plan for the Homeless during cold wet weather over the winter months; this plan evolved from the Extreme Cold Wet Weather Response.

### *PURPOSE*

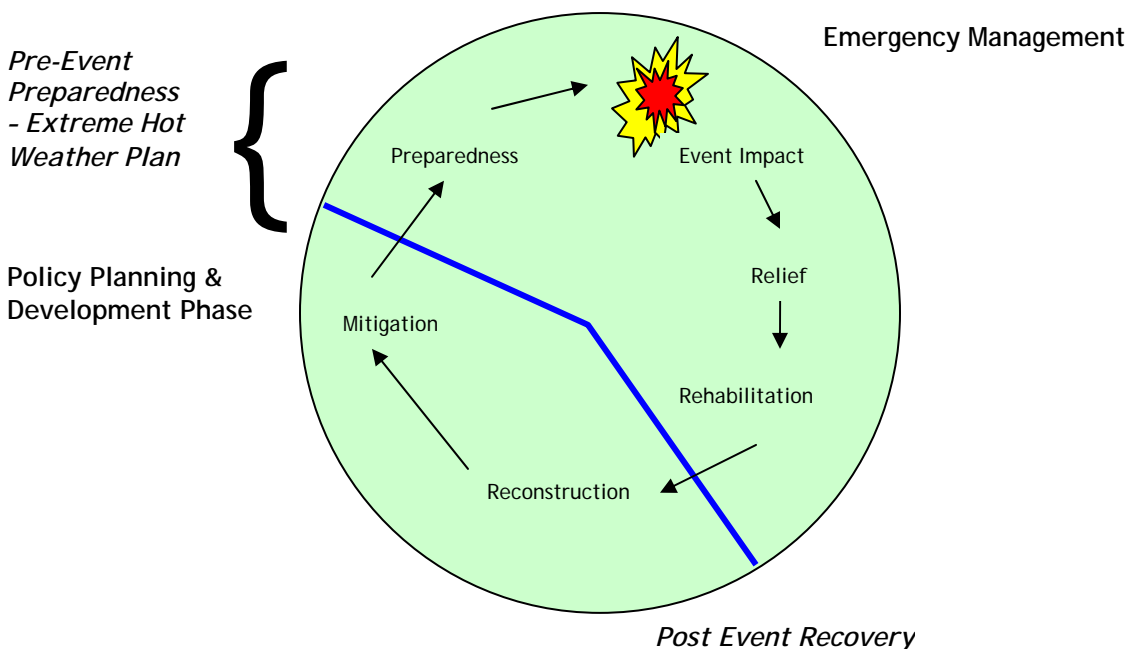
July 29, 2009 was one of the hottest days on record for Vancouver. That same day Curtis Brick, a homeless, Aboriginal man, lay on the ground in busy Grandview Park. After several hours, when help was eventually summoned, he was beyond medical assistance.

As a result of Curtis Brick's death, Council on September 10, 2009, moved that:  
 "FURTHER THAT staff undertake a review of existing extreme weather emergency services offered by the City and make recommendations on these services that would further reduce the risk for street homeless and other vulnerable populations, such as homebound senior citizens, in the event of extreme heat or cold events."

This report provides follow up to this motion in the form of a brief review and a proposed Preparedness and Response Plan for 2010.

## **BACKGROUND**

Proactive responses to extreme weather events form part of the overall disaster preparedness and response plans of the City of Vancouver and the Province of B.C. The Extreme Hot Weather Preparedness and Response Plan focuses on the adaptation of individuals to extreme heat and an alert system when heat events occur. In the event of extended extreme heat situation, the plan will move out of a preparedness phase and the emergency response plans of the City and Province will take effect.



### ***I. Roles and Responsibilities***

- The Province of BC and Vancouver City Council have identified the need for a response to extreme weather conditions, beginning initially with extreme cold and wet weather conditions. Should an extreme weather situation escalate to the point where public safety is at risk, the Emergency Operations Centre may be activated to coordinate response activities.
- Vancouver Coastal Health Authority (VCHA) identifies the needs of local populations for health services, plans and provides services to the public.
- Worksafe BC provides guidelines for employers regarding the health impacts of heat on employees.

- A wide variety of organizations in Vancouver provide services to vulnerable populations, including those most vulnerable to the impacts of extreme heat. Providing information to the staff within these organizations on the vulnerability of their clients to the impacts of heat and how to prepare and respond is a critical part of the Plan.
- In addition to the role of government the broader community is an invaluable resource in ensuring the safety of vulnerable citizens during periods of extreme weather. The reach of neighbours, family, friends, and others (shopkeepers, passer-bys, and acquaintances) cannot be matched by the public sector; limited as it is by resources, varying mandates, and other pressing priorities. Human interest in others remains the best adaptation strategy and response plan available and is a critical part of this plan.

## *II. Existing Responses to Extreme Cold or Wet Weather:*

- Extreme winter weather events are addressed through the Greater Vancouver Shelter Strategy's (GVSS) Extreme Weather Response Plan; funded by BC Housing and in effect from the fall through spring each year.
- A Winter Alert process is used to coordinate the opening of shelters to ensure that there are shelter beds available throughout the duration of an extreme winter weather event; and to notify agencies and service providers, who work with the homeless, which shelters will be open each night.
- Winter Alerts are called by the GVSS Sub-Regional Coordinator when weather conditions are deemed severe enough to present a substantial threat to the life or health of homeless persons in that specific community.
- There are currently eight communities in Metro Vancouver with extreme winter weather response plans.

## *III. Responses to Extreme Hot Weather*

- Municipalities across Canada and North America are implementing mitigation and adaptation strategies to protect people, infrastructure, ecosystems, and economies from the impacts of extreme weather.
- However no municipality in B.C. has a response plan for extreme heat and its affects on people.
- Municipal adaptation plans typically include education on the impacts of heat, tips on how to reduce individual risk, and civic and health alerts prompting people to take action during periods of extreme heat.

## *IV Extreme Hot Weather Committee*

An Extreme Hot Weather (EHW) Committee was formed to develop a response to extreme hot weather events in Vancouver. The EHW Committee was led by the Community Services Group and included representatives from the Vancouver Coastal Health Authority (VCHA), BC Housing (BCH), Greater Vancouver Shelter Strategy (GVSS), and the Coroner's Office; internal City Departments included Emergency Management, Vancouver Public Library, Parks and Recreation, Engineering, and Corporate Communications. Consultation on the Extreme Hot Weather Preparedness and Response Plan was carried out with Vancouver Fire and Rescue Services and the Vancouver Police Department, as well as Aboriginal health organizations.

## *DISCUSSION*

### *Extreme Hot Weather Heat Preparedness and Response Plan*

A health promotion approach has been adopted, enabling people to increase control over and to improve their health by creating supportive environments for health, strengthening community action through coordination, and supporting people to develop a “heat plan” when extreme heat occurs.

The Preparedness and Response Plan has been divided into Phase I and II to ensure immediate action while acknowledging that tracking, understanding, and adapting to the impacts of heat in Vancouver as weather patterns change and fluctuate, is an iterative process. Through this phased approach the City, with its partners, will coordinate priority actions while building a longer term, community based adaptation plan. Phase I implements an initial Preparedness and Response Plan for the summer of 2010; while Phase II includes exploring and understanding the local climate and the varying impacts of heat on different areas of the City, assessing the impacts on people in Vancouver, and exploring options for further actions. Approaches effective in assisting citizens most vulnerable to the impacts of heat will be identified, other resources - e.g. a water truck - will be explored and other activities will be identified for implementation in 2011. As well approaches to engage all citizens to take precautions during extreme heat will be explored.

#### *A. Plan Purpose*

To initiate and coordinate a community based response to the health impacts of extreme heat on the most vulnerable citizens of Vancouver by:

- Incorporating as part of the City of Vancouver’s Urban Health Program to leverage partnerships and resources where possible;
- Assessing need and establishing an iterative annual plan;
- Providing heat awareness information to City staff, VCHA staff, health and housing outreach workers - these groups form the *Key Responders* - and community organizations;
- Providing heat awareness information to the public, with a focus on vulnerable populations;
- Coordinating action across the community during periods of extreme heat; and
- Calling to action the citizens of Vancouver to **take care and provide care**.

#### *B. Guiding Principles*

- Building on the Greater Vancouver’s Shelter Strategy’s (GVSS) Extreme Weather Response Plan
- Increase public awareness of health impacts of extreme hot weather.
- Promote healthy and resilient populations and communities.
- Empower and engage communities to adapt to extreme hot weather.
- Ensure heat health promotion and protection for vulnerable populations.
- Mobilize resources to minimize heat impacts especially on vulnerable populations.
- Promote research into the impacts of extreme heat on vulnerable populations.

### *C. Target Population*

The most vulnerable to the health impacts of heat identified in health research includes seniors, children under five, and individuals with pre-existing illnesses or taking certain medications. The effects of heat are exacerbated by social isolation, lower incomes, homelessness, life style, and acclimatization to the local weather. As a result seniors who are socially isolated and have low incomes, the homeless person with an addiction or mental health issue, and the Aboriginal person who is homeless are at higher risk during periods of extreme heat.

**The focus for Phase I of this Plan is vulnerable seniors and people who are homeless or who are marginally housed.**

### *E. Heat Awareness*

- A brochure providing “beat the heat” tips and a map of City community centres, libraries, public washrooms and water fountains will be distributed in paper and electronic versions to *Key Responders*, electronically to community organizations, and it will also be posted on the COV website.
- A guide to looking after yourself and others during hot weather will be distributed to *Key Responders*, electronically to community organizations, and it will also be posted on the COV website.
- Press releases will be distributed from the COV and VCHA Communications departments announcing the heat alert system and reminding people of the risks of extreme hot weather; including encouraging people to attend public spaces for social interaction, shade, water and washrooms.
- The COV website will be used to post heat information and tips to beat the heat, with links to VCHA sites and other electronic or web based resources.

### *F. Heat Alerts*

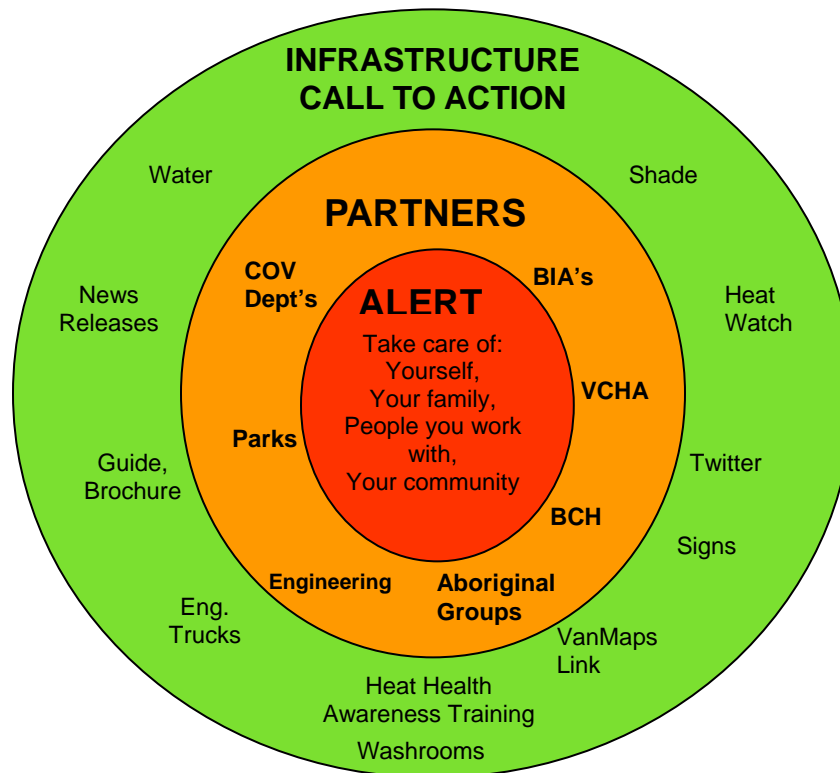
Following the lead of other cities - Toronto, Fredericton, Phoenix and Chicago to name a few - an Extreme Hot Weather Alert system will be used to mobilize Key Responders, community organizations and the citizens of Vancouver during periods of extreme hot weather to:

- take care of themselves,
- take care of their families,
- take care of the people they work with, and
- take care of their communities.

Vancouver Coastal Health Medical Health Officers will issue a community wide alert that will call on community members to take precautions during periods of extreme heat. The Alerts will be called by the Medical Health Officers of the Vancouver Coastal Health Authority when weather conditions are deemed severe enough to present a substantial threat to the life or health of people vulnerable to heat.

Factors considered in the decision to call an Alert, include:

- Higher than normal temperatures (for that timeframe);
- Humidity and air quality,
- the duration of the hot weather spell; and
- other factors on a neighbourhood or Urban Heat Island basis, such as access to water, access to shade, or cooling places.



An Extreme Hot Weather Alert will be called when hot weather conditions are deemed severe enough to present a substantial threat to the life or health of vulnerable persons.

### *G. IMPLEMENTATION PLAN*

#### Goals for Phase I

- Establish Committee and develop initial plan for 2010.
- Provide heat awareness information to front line workers within the City and VCHA.
- Disseminate information to community resources on the health impacts of heat.
- Issue alerts to those most at risk of heat-related illness that hot weather conditions are either imminent or currently exist, and to take precautions.
- To track the impacts of these alerts
- Identify and initiate discussions with research partners in carrying out community assessments.
- Pilot the use of a water station in various parts of Vancouver in July and August 2010.

## Goals for Phase II

Comprehensive impact assessments can provide valuable insights into the effects of climate change on vulnerable populations. Phase II will increase the knowledge base of the health impacts of extreme heat on the citizens of Vancouver, understand the areas of greatest vulnerability within the City, begin linking this information to mitigation activities such as the planting of trees, and investigate the effectiveness of measures, such as the water stations or the proposed water truck. Phase II will commence once the Plan is in place, and will continue through to 2011.

- Develop an implementation plan for emergency response and emergency services during an extreme heat event.
- Carry out table top exercises to test the plan.
- Identify and initiate discussions with research partners in carrying out community assessments.
- Partner with researchers on mapping the geographical distribution of heat impacts (VanMaps connection) on vulnerable populations – and areas for potential increase in heat given changing weather patterns.
- Collect neighbourhood level weather information with the assistance of people from the homeless community.
- Assess need and feasibility for ongoing measures such as the portable water stations or a water truck.
- Identify and pilot additional actions for implementation in future years.
- Identify strategies to engage all citizens in preparing for extreme heat and taking precautions during periods of extreme heat.
- Link to City mitigation strategies to address areas of greatest need e.g. areas to plant trees or provide water.

## *FINANCIAL IMPLICATIONS*

There are no direct financial implications. Costs for a water truck or additional water stations, will have to be determined.

## *ENVIRONMENTAL IMPLICATIONS*

This Response Plan focuses on adaptation strategies for taking care of vulnerable people during heat events. However links to the *Green City Action Team Recommendations* and *Vancouver 2020 A Bright Green Future*, are critical for lowering the risk for vulnerable populations.

- The Vancouver Extreme Hot Weather Response Plan connects to the Green City Action Team Quick Start Recommendations to expand and connect green spaces and to fund community projects.
- There is also a link to the proposals in Greenest City Action Team 10 Year Plan: “*Vancouver 2020 A Bright Green Future*” including those in The Green Economy, Green Jobs- Green Buildings; Greener Communities – Easy Access to Nature; and Human Health – Clean Water & Clean Air.



### ***SOCIAL IMPLICATIONS***

The Extreme Hot Weather Preparedness and Response Plan is a component of the Urban Health program; building capacity to engage community and building partnerships to mobilize action. By engaging Key Responders, community organizations, and the public in a call to action to care for the people vulnerable to the impacts of heat, this Plan follows the World Health Organization's guidelines for health promotion and the objectives of "*Vancouver 2020: A Bright Green Future*".

### ***Timeline***

<b>Action</b>	<b>Who</b>	<b>What</b>	<b>When</b>	<b>Deliverable</b>
Research & develop plan	Extreme Hot Weather (EHW) Committee	Draft plan completed	January to May 2010	Draft report & plan
Preparedness & Response Plan completed	EHW Committee	Report and plan completed	July 2010	Report & plan to Council
Information resources developed	CSG Graphics Dept	Poster and flyer developed, information on washrooms, water linked.	May, June 2010	Information resources available
Press Release to public	COV Communications & VCHA Communications departments	Information to public on risks of hot weather and how to protect themselves, their family, their community and the people they work with.	June 2010	Information posted on City Website, links to resources & VCHA site
Heat awareness information available to the Key Responders	EHW Committee	Provision of information to COV & VCHA Key Responders	June, July 2010	Key Responders know impacts of heat on vulnerable people and how to respond.
Alert process in place	VCHA Medical Health Officers	Alert process ready, hot weather is monitored	July to Sept 2010	Information to public that hot weather is beginning and to prepare
Alert is called as needed	VCHA Medical Health Officers COV Communications & VCHA Communications departments	Alert is called: info to public via website, Twitter, news releases that hot weather is occurring and to take precautions. Key Responders & community on alert for vulnerable people.	July to Sept 2010	Public & key responders alerted to protect themselves, their family, people they work with & their community.
Review of Plan	EHW Committee	2010 Implementation evaluated	Oct - Nov 2010	Review of implementation completed.

## *COMMUNICATIONS PLAN*

There is a critical need to communicate effectively when weather has the potential to place human health at risk.

Vancouver Coastal Health Authority (VCHA) has a well rehearsed communications plan for extreme heat, including designated spokespersons, a rigorous media relations strategy with specific preventative messaging and spokespersons, as well as extensive communications outreach through home-care and other services.

City of Vancouver communications staff have a strong working relationship with VCHA communications personnel and routinely share communications materials to ensure a consistent message is given to the public and media.

During periods of high to extreme heat, public and media information will focus on the following topics:

- Heat awareness, hydration, home and body cooling techniques, maintaining contact with others, reduced physical activity, the location of public washrooms, fountains and taps for bottle refills and the use of shady locations in City parks and cool spots in community centres.

Given the need to get information out to the public widely and quickly, media will be the primary communications tool. In particular, radio is a very effective communications link for at-risk populations of seniors and homeless. Media are also strong supporters of public service messaging of this nature, which ties in well with the hot-weather stories media do.

The City will work with VCHA communications to issue news releases, information bulletins, pitch media opportunities and provide messaging and spokespersons.

Supporting communications tools include:

- Posting specific information and links prominently on the City and VCHA website;
- Using the City's Facebook and Twitter services to drive out the messaging; and,
- A media event with the Mayor and Chief Medical Health Officer in the event of a prolonged period of extreme weather where a higher profile is required.

## *EVALUATION*

The EHW Committee will periodically assess the impacts of the Alert system and the community and key responder engagement strategies. This may include providing additional supports as necessary to respond to heat events and connecting with Emergency Management as they monitor the severity of the weather and the impacts on vulnerable populations.

## *CONCLUSION*

A community based adaptive approach is recommended utilizing heat education and community engagement and an Alert system. An Alert will mobilize people and the community that the current spell of hot weather is a risk to health and they need to take steps to prevent heat emergencies. Should the heat event escalate to the point where public safety is at risk, the Emergency Operations Centre may be activated to coordinate response activities.

# CITY OF VANCOUVER

## 2010 EXTREME HOT WEATHER PREPAREDNESS & RESPONSE PLAN

Vancouver  
Extreme Hot Weather  
Committee  
July 5, 2010



Changes in climate patterns with resulting extremes of weather and changes in temperature have been linked to significant, negative impacts on health by the World Health Organization (WHO).

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## EXECUTIVE SUMMARY

The **Extreme Hot Weather Preparedness and Response Plan** is a community based approach plan that implements adaptation actions to lessen the impacts of extreme hot weather on the citizens of Vancouver. This plan has been developed and will be reviewed and adjusted periodically through a Committee representing: City departments, Vancouver Coastal Health and other government representatives, and in discussion with community members. Through a phased approach the City, with its partners, will coordinate priority actions while building a longer term, community based adaptation plan that educates, raises awareness, and builds community resilience to extreme heat over time.

Municipalities across Canada and North America are implementing mitigation and adaptation strategies to protect people, infrastructure, ecosystems, and economies from the impacts of climate change. Adaptation includes identifying short and medium term impacts of climate change - extreme heat - and developing solutions to protect people, ecosystems, and infrastructure. Adaptation strategies in Canadian cities are in the early stages of development and there isn't an inventory of proven approaches for communities to reference (Municipal Resources for Adapting to Climate Change, ICLEI, 2009). In the absence of a blueprint the City of Vancouver has drawn on early experiences of municipalities including Toronto, Montreal, a number of U.S. and European cities, to identify actions to implement, adapt as needed, and evaluate within the context of Vancouver's environment. This priority action plan is implemented during Phase I of the Plan, in the summer of 2010; while Phase II provides for the building of our knowledge base and a toolbox of effective approaches.

The Extreme Hot Weather Preparedness and Response Plan is a framework for action to address extreme hot weather in Vancouver, identifying:

- health impacts of extreme heat on the health of citizens<sup>1</sup>,
- populations vulnerable to the impacts of extreme heat,
- approaches to assessing the areas of risk within the City,
- elements of successful health promotion, and
- key responders and community stakeholders.

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<sup>1</sup> Additional information on the impacts of heat can be found in Appendix A.

## Purpose of Preparedness and Response Plan

To initiate and coordinate a community based response to the health impacts of extreme heat on the most vulnerable citizens of Vancouver by:

- assessing need,
- identifying adaptation responses, including education,
- coordinating action across the community during periods of extreme heat, and
- calling to action the citizens of Vancouver to **take care and provide care.**

## Guiding Principles:

- Increase public awareness of health impacts of extreme weather.
- Empower and engage communities to adapt to extreme weather.
- Ensure health promotion and protection for vulnerable populations.
- Mobilize resources to minimize impacts on vulnerable populations.
- Promote healthy and resilient populations and communities.
- Promote research into the impacts on vulnerable populations.

## Phase I Goals

- Establish annual plan.
- Provide heat awareness information to key responders within the City and VCHA.
- Disseminate information to community resources on the health impacts of heat.
- Issue alerts to those most at risk of heat-related illness that hot weather conditions are either imminent or currently exist, and to take precautions.
- Track the impacts of these alerts.
- Pilot the use of a water station in various locations in Vancouver in July and August 2010.

**The focus for 2010 is on vulnerable seniors and people who are homeless or whose housing is marginal.**

## Phase II Goals

- Develop an implementation plan for emergency response and emergency services during an extreme heat event.
- Carry out table top exercises to test the plan.
- Identify and initiate discussions with research partners in carrying out community assessments.
- Partner with researchers to develop maps showing the geographical distribution of heat impacts (VanMaps connection) on vulnerable populations - and areas for potential increase in heat given changing weather patterns.
- Collect neighbourhood level weather information with the assistance of volunteers from the homeless community.
- Assess need for ongoing measures such as the portable water stations or a water truck.
- Identify and pilot additional actions for implementation in future years.
- Identify strategies to engage all citizens in preparing for extreme heat and taking precautions during periods of extreme heat.
- Link to City mitigation strategies to address areas of greatest need e.g. areas to plant trees or provide water.

## Hot Weather Alerts

Following the lead of other cities an Extreme Hot Weather Alert system will be used to mobilize key responders, community organizations and the citizens of Vancouver during periods of extreme hot weather to:

- take care of themselves,
- take care of their families,
- take care of the people they work with, and
- take care of their communities.

Under the Extreme Hot Weather Preparedness and Response Plan, Vancouver Coastal Health Medical Health Officers, will issue a community wide alert that will call on community members to take precautions during periods of extreme heat.

An Alert will be called when hot weather conditions are deemed severe enough to present a substantial threat to the life or health of vulnerable persons.

Factors which will be considered in the decision to call an Extreme Hot Weather Alert, include:

- Higher than normal temperatures (for that timeframe);
- Humidity and air quality,
- the duration of the hot weather spell; and
- other factors on a neighbourhood or Urban Heat Island basis, such as access to water, access to shade, or cooling places.

Alerts will be called and cancelled by the Medical Health Officers of VCHA.



## VANCOUVER 2010 EXTREME HOT WEATHER PREPAREDNESS AND RESPONSE PLAN

The Preparedness and Response Plan has been divided into Phase I and II to ensure immediate action while acknowledging that tracking, understanding, and adapting to the impacts of heat in Vancouver as weather patterns change and fluctuate, is an iterative process. Through this phased approach the City, with its partners, will coordinate priority actions while building a longer term, community based adaptation plan. Phase I implements an initial Preparedness and Response Plan for the summer of 2010; while Phase II includes exploring and understanding the local climate and the varying impacts of heat on different areas of the City, assessing the impacts on people in Vancouver, and exploring options for further actions. Approaches effective in assisting citizens most vulnerable to the impacts of heat will be identified, other resources - e.g. a water truck - will be explored and other activities will be identified for implementation in 2011. As well approaches to engage all citizens to take precautions during extreme heat will be explored.

### Goals for Phase I

- Establish Committee and develop initial plan for 2010.
- Provide heat awareness information to front line workers within the City and VCHA.
- Disseminate information to community resources on the health impacts of heat.
- Issue alerts to those most at risk of heat-related illness that hot weather conditions are either imminent or currently exist, and to take precautions.
- To track the impacts of these alerts
- Identify and initiate discussions with research partners in carrying out community assessments.
- Pilot the use of a water station in various locations across Vancouver in July and August 2010.

### Goals for Phase II

A longer term perspective on assessing the impacts of heat on the neighbourhoods and vulnerable populations of Vancouver is required. Comprehensive impact assessments can provide valuable insights into the effects of climate change on vulnerable populations. In Montreal this process has included mapping the microcosms of community demographics and microclimates. When municipalities partner with research institutions - universities, Clean Air Partnership, Natural Resources Canada - that provide the rigor and expertise to identify and track impacts of heat on communities and vulnerable populations, the resulting information can help to shape effective response plans.

The focus of Phase II is to build the knowledge base of the health impacts of extreme heat on the citizens of Vancouver, understand the areas of greatest vulnerability within the City, begin linking this information to mitigation activities such as the planting of trees, and investigate the effectiveness of measures, such as the water stations or the proposed water truck. Phase II of the Extreme Hot Weather Preparedness and Response Plan will commence once the Plan is in place, and will continue through to 2011.

- Develop an implementation plan for emergency response and emergency services during an extreme heat event.
- Carry out table top exercises to test the plan.
- Identify and initiate discussions with research partners in carrying out community assessments.
- Partner with researchers on mapping the geographical distribution of heat impacts (VanMaps connection) on vulnerable populations - and areas for potential increase in heat given changing weather patterns.
- Collect neighbourhood level weather information with the assistance of people from the homeless community.
- Assess need and feasibility for ongoing measures such as the portable water stations or a water truck.
- Identify and pilot additional actions for implementation in future years.
- Identify strategies to engage all citizens in preparing for extreme heat and taking precautions during periods of extreme heat.
- Link to City mitigation strategies to address areas of greatest need e.g. areas to plant trees or provide water.

### **Priorities**

Following the lead of other cities the 2010 Response Plan is recommending that priority groups be identified within the populations vulnerable to heat. The priorities for 2010 are people who are vulnerable seniors, the homeless and people who have marginal housing.

## Timeline

Action	Who	What	When	Deliverable
Research & develop plan	EHW Committee	Draft plan completed	January to May	Draft report & plan
Preparedness & Response Plan completed	Committee	Report and plan completed	June	Report & plan to Council
Information resources developed	CSG Graphics Dept	Poster and flyer developed, information on washrooms, water linked.	May, June	Information resources available
Press Release to public	COV Communications & VCHA Communications	Information to public on risks of hot weather and how to protect themselves, their family, their community and the people they work with.	June	Information posted on City Website, links to resources & VCHA site
Heat awareness information available to the Key Responders	EHW Committee	Provision of information to COV & VCHA Key Responders	June, July	Key Responders know impacts of heat on vulnerable people and how to respond.
Alert process in place	VCHA Medical Health Officers	Alert process ready, hot weather is monitored	July to Sept	Information to public that hot weather is beginning and to prepare
Alert is called as needed	VCHA Medical Health Officers	Alert is sent to Key Responders and Public via website, Twitter, news releases that hot weather is occurring and to take precautions. Key Responders & community on alert for vulnerable people.	July to Sept	Public & key responders alerted to protect themselves, their family, people they work with & their community.
Review of Plan	EHW Committee	2010 Implementation evaluated	Oct - Nov	Review of implementation completed.

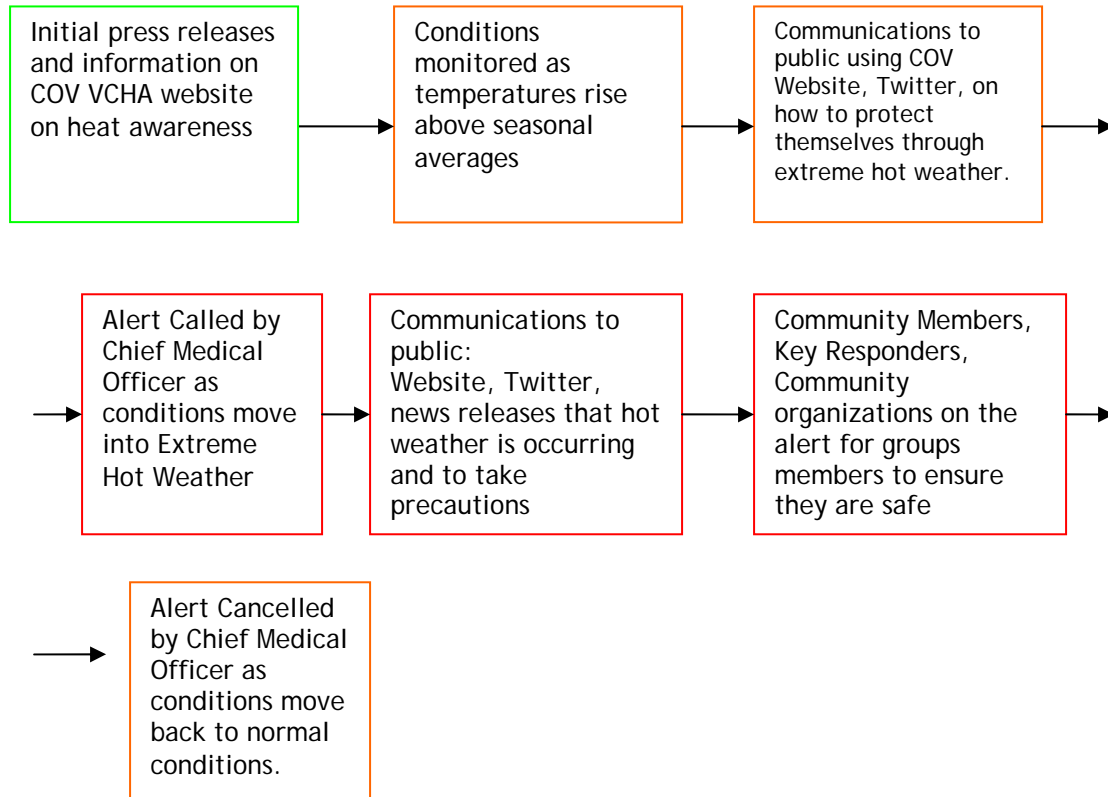
## Hot Weather Alerts

Under the Extreme Hot Weather Response Plan, Vancouver Coastal Health Medical Health Officers, will issue a community wide alert that will call on community members to take precautions during periods of extreme heat. An Alert will be issued for varying lengths of time during the summer and fall as weather conditions and need dictate.

An Alert will be called when hot weather conditions are deemed **severe enough to present a substantial threat to the life or health of vulnerable persons**. Factors for consideration include:

- Higher than normal temperatures (for that timeframe);
- Humidity and air quality,
- the duration of the hot weather spell; and
- other factors on a neighbourhood or Urban Heat Island basis, such as access to water, access to shade, or to cooling places.

Alerts will be called and cancelled by the Medical Health Officers of VCHA.



### Engaging Key Responders and Community Organizations

Changing individual behaviour across the City to adapt to extreme heat can only be successful if there is an engagement of the community; from the organizations that work with vulnerable populations, to the people who are vulnerable, to the general public. In 2010 an initial wave of heat education and awareness will be initiated targeting *Key Responders*; these are front line workers with the City and the Vancouver Coastal Health Authority, as well as health and housing outreach workers, specifically:

- Within COV Engineering and CSG departments, VPL, VPD, and Parks,
- VCHA health providers in community clinics,
- VCHA home support workers,
- Health and Housing Outreach workers.

Heat awareness materials and information on the Extreme Hot Weather Alert system will be provided to the community organizations across the City who work directly with vulnerable populations. A list of these organizations can be found in **Appendix B**.

In 2010 the following **proactive** approaches will be utilized:

- Notices on the City and VCHA website providing heat awareness information
- Brochures that can be translated into different languages
- Posters
- Presentations to key stakeholders
- The use of Public Service Announcements will be investigated.

In 2010 the following **active** approaches will be utilized:

- Alerts to the public via a variety of methods - posters, Twitter, CoV website,
- Alerts to service providers for vulnerable groups
- Contacting SRA owners/managers to double checks on residents especially seniors
- Piloting a water station in various parts of Vancouver in July and August 2010.

## **Communications Plan**

There is a critical need to communicate effectively when weather has the potential to place human health at risk.

Vancouver Coastal Health Authority (VCHA) has a well rehearsed communications plan for extreme heat, including designated spokespersons, a rigorous media relations strategy with specific preventative messaging and spokespersons, as well as extensive communications outreach through home-care and other services.

City of Vancouver communications staff have a strong working relationship with VCHA communications personnel and routinely share communications materials to ensure a consistent message is given to the public and media.

During periods of high to extreme heat, public and media information will focus on the following topics:

- Heat awareness, hydration, home and body cooling techniques, maintaining contact with others, reduced physical activity, the location of public washrooms, fountains and taps for bottle refills and the use of shady locations in City parks and cool spots in community centres.

Given the need to get information out to the public widely and quickly, media will be the primary communications tool. In particular, radio is a very effective communications link for at-risk populations of seniors and homeless. Media are also strong supporters of public service messaging of this nature, which ties in well with the hot-weather stories media do.

The City will work with VCHA communications to issue news releases, information bulletins, pitch media opportunities and provide messaging and spokespersons.

Supporting communications tools include:

- Posting specific information and links prominently on the City and VCHA website;
- Using the City's Facebook and Twitter services to drive out the messaging; and,
- A media event with the Mayor and Chief Medical Health Officer in the event of a prolonged period of extreme weather where a higher profile is required.

## **Evaluation**

At the end of the hot weather season the EHW Committee will reconvene to assess the impacts of the Alert system, and the community and key responder engagement strategies. Evaluating the effectiveness of the messaging to vulnerable groups, what worked well and what can be improved.

## APPENDICES

### APPENDIX A: BACKGROUND - Climate Change and Extreme Heat

Environmental heat and humidity can harm any person and extreme heat can cause death; and the harmful impacts of heat affect the most vulnerable populations disproportionately.

Changes in climate patterns with resulting extremes of weather and changes in temperature<sup>2</sup> have been linked to significant, negative impacts on health by the World Health Organization (WHO).<sup>3</sup>

In an article published in June 2010, Dr. Kosatsky (BCMA Journal, June 2010) writes that “preliminary analysis of daily deaths recorded during the extreme heat event of late July-early August 2009” in British Columbia identified 156 additional deaths during this period.

Canada is vulnerable to a range of impacts associated with climate change, including rising temperatures, more frequent, intense storms and rising sea levels (Berry, Paszkowski, Health Canada 2007). Climate changes are being felt across the country and in response municipalities are implementing mitigation and adaptation strategies to protect people, infrastructure, ecosystems, and economies (Municipal Resources for Adapting to Climate Change, 2009). Approaches to climate changes in cities usually include both mitigation and adaptation strategies. Mitigation is defined as slowing the rate of climate change by encouraging conservation and energy efficiency, e.g. curbing urban sprawl, increasing the use of public transportation. Vancouver’s Green City Initiative is a mitigation strategy that seeks to reduce the overall carbon footprint of the City.

Adaptation is the process of identifying short and medium term impacts of climate change and developing solutions to protect people, ecosystems, and infrastructure. North American cities have typically implemented an alert process as a keystone of their adaptation plan; setting priority groups as an initial focus, and adapting their plans over time. Alerts are called and cancelled, usually by Medical Health Officers, when heat/humidity and air quality pose a health risk. Vulnerable populations and those who serve them are alerted to the potential harm from heat and prompted to take steps to protect themselves.

Additional background information on the impacts of heat in a municipal setting can be found in the City of Vancouver “Extreme Hot Weather Backgrounder” 2010.

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<sup>2</sup> World average surface temperatures increased by approx 0.6 deg C, with 2/3 of the increase since 1975 (“Climate Change and Human Health – risks and responses. Summary. WHO 2003).

<sup>3</sup> The WHO determined 35,000 deaths in Europe in 2003, a result of a heat wave, were preventable.

## **APPENDIX B: ROLE OF GOVERNMENT**

The Province of BC and Vancouver City Council have identified the need for a response to extreme weather conditions, beginning initially with extreme cold and wet weather conditions. An Extreme Wet Weather Response, in effect from October to March each year, is managed through the Greater Vancouver Shelter Strategy; since 2006 this has been coordinated by a Sub-Regional EWR Coordinator.

BC Housing funds shelters, year round and Extreme Wet Weather from October through March, across BC. Worksafe BC provides guidelines for employers regarding the health impacts of heat on employees.

### **Province of BC**

The “Assistance to Shelter Act”, 2009, provides that when an extreme weather alert has been issued for a community the police may take a “person at risk”, adults’ age 19 +, to an emergency shelter or “other accommodation” for their protection.

The Ministry of Health is responsible for setting health care direction, legislation, policy and standards, allocate funding, and monitoring of the health care system in BC. The Health Authorities are a key service partner with the Ministry in achieving Ministry goals.

### **Vancouver Coastal Health Authority**

Vancouver Coastal Health is responsible for providing quality health care services to the people and communities of Vancouver, Richmond, the North Shore and Coast Garibaldi, Sea-to-Sky, Sunshine Coast, and Central Coast. Public Health strategies at Vancouver Coastal Health are designed to improve the health of communities and to protect the public from health risks. VCH Public Health includes the following core functions: health improvement; disease, injury, and disability prevention; environmental health; population health; and health emergency management.

Under the leadership of the Chief Medical Officer of Health, VCH is responsible for monitoring the needs of local populations, and for planning and providing services to the public in accordance with legislation and Ministry policy. Medical health officers must advise authorities, local governments and general public within the designated area of any public health issues, including health hazards such as the extreme weather events.



## City of Vancouver

September 10, 2009 the Vancouver City Council directed staff to undertake a review of existing extreme weather emergency services offered by the City and make recommendations on these services that would further reduce the risk for vulnerable populations in the event of extreme heat events.

In addition to the role of government the broader community is an invaluable resource in ensuring the safety of vulnerable citizens during periods of extreme weather. The reach of neighbours, family, friends, and others (shopkeepers, passer-bys, and acquaintances) cannot be matched by the public sector; limited as it is by resources, varying mandates, and other pressing priorities. Human interest in others remains the best adaptation strategy and response plan available and should be seen and respected as a critical part of this plan.

## APPENDIX C: EXTREME HOT WEATHER COMMITTEE

In November 2009 a working group was established by the City of Vancouver, CSG, to review extreme weather emergency services, investigate the need for a coordinated response and develop a Hot Weather Strategy and Response plan. This group will continue providing oversight during the Alert season and evaluating the 2010 Response plan and setting the 2011 Response Plan. This group included representatives from:

- City of Vancouver - Engineering, Community Services Group, Emergency Management Services, Parks and Recreations, Fire and Rescue Services, and Corporate Communications.
- Vancouver Coastal Health Authority
- The Greater Vancouver Shelter Strategy
- BC Housing
- BC Coroner Service

## APPENDIX D: COMMUNITY ORGANIZATIONS AND KEY RESPONDERS

COMMUNITY ORGANIZATIONS		
Aboriginal Front Door	KidSafe Project Society, The	SUCCESS - Youth At Risk Program
Adolescent Outreach Services	Kitsilano Neighbourhood House	SUCCESS - Counselling Service for the Chinese Community
Agape Ministries	Kitsilano Neighbourhood House - Seniors Links Coordinator	Take a Hike Youth at Risk Foundation
ALDA - Adult Learning Develop. Assoc.	Kitsilano Nhbhd House - Youth Services	Taiwanese Canadian Cultural Soc. - Golden Age Centre
Arts in Action Society (Purple Thistle)	Kiwassa Neighbourhood Services Association	Tenant Resource & Advisory Centre Society - TRAC
BC Centre for Disease Control / Street Nurses	La Boussole, Centre Communautaire Societe	Tetra Society of North America
BC Coalition of People with Disab. - Membership & Outreach Co	Learning Disabilities Assoc. of BC, The	Thunderbird Nhbhd Assoc. - Family Place
BC FTM Network	Leave Out Violence (LOVE) British Columbia	Triage
BC Persons with AIDS Society	Little Mountain Neighbourhood House Society	The Door Is Open - Catholic Charities
BC Women's Hospital & Health Centre (Oak Tree)	Little Mountain Neighbourhood House - Early Years Project	Theatre for Living Soc. (Headlines Theatre)
BIA - South Granville	Little Mountain Nhbhd House Soc - Learning is First (LIFT)	Union Gospel Mission Drop In Center
Battered Women's Support Services	Living Systems Counselling: Education, Training & Research Soc.	Union Gospel Mission Women's Drop In Center
Big Brothers of Greater Van.	Living Through Loss Counselling Society of B.C.	Urban Native Youth Association (U.N.Y.A.)
Big Sisters of BC Lower Mainland	Lookout Downtown Shelter	Vancouver Aboriginal Friendship Centre
Boys and Girls Clubs of Greater Van.	Lu'ma Native Housing Society	Vancouver Coast Mental Health
Canadian National Institute for the Blind, BC-Yukon Division	Marpole Oakridge Family Place Soc.	Vancouver Intensive Supervision Unit (VISU)
Canadian Paraplegic Assoc. (B.C.)	Marpole Oakridge Area Council - Seniors	Vancouver Native Health Society
Cedar Cottage Neighbourhood House	Mission Possible	Vancouver Native Health Society - Aboriginal Learning Program
Centre for Sustainability	MOSAIC - Community Development	Vancouver Aboriginal Community Policing Centre
Children of the Street Society	MOSAIC - Connecting Fathers	Vancouver Aboriginal Restorative Justice Program
Collingwood Neighbourhood House Society	MOSAIC/Strathcona - Vietnamese Family Counselling Project	Vancouver Community Network
Community Legal Assistance Society (CLAS) - LSLAP	Motivation, Power and Achievement Society (M.P.A.)	Vancouver Cross Cultural Seniors Network Society
Community Living BC	Multicultural Helping House Society	Vancouver Native Health Society

## COMMUNITY ORGANIZATIONS

Community Voice Mail (Lu'ma Native Housing Association)	Mt. Pleasant Neighbourhood House	VANDU
Covenant House	Mt. Pleasant Family Centre Soc.	Vancouver Area Network of Drug Users (V.A.N.D.U.)
Crisis Interven. & Suicide Prev. Ctr. Of BC	NEC Native Indian College (Urban Native Indian Ed).	Vancouver Assoc. for Survivors of Torture - VAST
Directions	Neighbourhood Helpers	Vancouver Rape Relief & Women's Shelter
Downtown Community Health Clinic	Network of Inner City Comm. Services Soc. - Van Roving Leaders	Vancouver Recovery Club
Downtown Eastside Women's Center	Network of Inner City Comm. Services Soc. - YELL & Y2	Vancouver Second Mile Soc. - DTES Seniors' Centre
Downtown Eastside Women's Centre - Chinese Seniors Outreach	Oakridge Seniors Society	Vancouver Second Mile Soc. - DTES Nbhd Helpers
Downtown Eastside Neighbourhood House (DTES NH)	PACE/WISH Mobile Access Project	Vancouver Society of Children's Centres VSOCC-Family Programs
Drug and Alcohol Meeting Support (D.A.M.S.)	PACE - Prostitution Alternatives Counselling & Education Soc.	Vancouver Status of Women - Referral and Resource
Dugout - Drop-in Society	Pacific Comm. Res. Society - Broadway Youth Res. Ctre	Volunteer Vancouver
DTES Senior's Center	Pacific Immigrant Resources Society (PIRS) - Outreach Workers	Vancouver Youth Services - Mental Health Worker
Eagle's Nest Preschool	Pacific Post Partum Support Society	VCHA Health Contact Center-Environmental Health
Eastside Family Place Society	PFAME - Qmunity (formerly Centre) Gay & Lesbian Services	Vancouver Second Mile Soc. - DTES Seniors' Centre
Evelyne Saller	Pathways Info Centre - PIC	VCHA LifeSkills Center
Family Services of Greater Vancouver	PeerNetBC - Kinex	VCHA-PHS Washington Needle Exchange
Family Services - Counselling Program	PEERS Vancouver Resource Society - HUSTLE: Men on the Move	Watari Research Assoc. - Comm Youth Outreach
Family Services - Directions - Street Youth Outreach	PLEA Community Services Society of BC	Waterside Child Development Center (1st), Princess Place
Franciscan Sisters of the Atonement	Pivot Legal (1st), United Native Nations (2nd)	West End Seniors Network
Frank Paul Society	Quest Outreach Society - Kitchen	West Side Family Place
Frog Hollow Neighbourhood House (ANH)	Renfrew-Collingwood Seniors' Soc.	Western Institute for the Deaf and Hard of Hearing
Gordon Neighbourhood House (ANH)	Round House	Wish Drop In Center-Maka Project
Healing Our Spirit BC Aboriginal HIV/AIDS Society	Salvation Army	WISH Drop-In Centre Society
Immigrant Svcs Soc of BC - MY Circle Program	Sheway	Women Against Violence Against Women

## COMMUNITY ORGANIZATIONS

Information Services Van. Soc.	St. James Community Service Society (1st), Tamura House	Yaletown House
Inland Refugee Soc. of BC	St. James Home Support	YouthCo AIDS Society
Insite & Onsite - VCH	St. James Community Services Society	Youth Outreach Service
Japanese Comm Vol Assoc - Tonari Gumi	South Vancouver Neighbourhood House	YWCA
Jewish Family Service Agency	South Granville Seniors Friendship Centre Soc.	YWCA - Crabtree Corner
Justice Education Soc of BC (former Law Courts Edu Soc of BC)	South Vancouver Family Place - Vancouver Life Skills Society	YWCA - Single Mothers Support Services
KAYA - Knowledgeable Aboriginal Youth Association	Strathcona Community Centre Association - S.O.S.	411 Seniors Centre
Kalayaan Center - Phillipine Woman Center	Strathcona Community Centre Association - Food Coordinator	Vancouver Coastal Health Maximally Assisted Therapy
Kettle Friendship Soc.	SUCCESS - Seniors QOL Prog.	

KEY RESPONDERS		
Vancouver Coastal Health	Three Bridges Community Health Centre	Park Board - Hastings CC
Downtown Community Health Centre	Vancouver Parks & Recreation Services (Admin. Office)	Park Board - Kensington CC
Evergreen Community Health Centre	Planning and Operations	Park Board - Kerrisdale CC
North Community Health Centres	Queen Elizabeth District	Park Board - Kitsilano CC
Pacific Spirit Community Health Centre	Park Board - Kerrisdale CC	Park Board - Marpole-Oakridge CC
Raven Song Community Health Centre	Park Board - Kitsilano CC	Park Board - Riley Park CC
South Community Health Centre	Park Board - Marpole-Oakridge CC	Park Board - Killarney CC
Three Bridges Community Health Centre	Park Board - Riley Park CC	Park Board - Mount Pleasant CC
Vancouver Parks & Recreation Services (Admin. Office)	Park Board - Sunset CC	Park Board - Ray-Cam Co-operative Centre
Planning and Operations	Park Board - West Point Grey CC	Park Board - Renfrew Park CC
Queen Elizabeth District	Park Board - Britannia CC	Park Board - Strathcona CC
Stanley District	Park Board - Champlain Heights CC	Park Board - Thunderbird CC
Vancouver East District	Park Board - Hastings CC	Park Board - Trout Lake CC
Park Board - Douglas Park CC	Park Board - Kensington CC	Vancouver Police Department
Park Board - Dunbar CC	Park Board - Kerrisdale CC	Vancouver Public Library
Vancouver Coastal Health	Park Board - Kitsilano CC	City - Streets Engineering
Downtown Community Health Centre	Park Board - Marpole-Oakridge CC	City - Streets Parking Enforcement
Evergreen Community Health Centre	Park Board - Riley Park CC	City - Streets Parking Management
North Community Health Centres	Park Board - Sunset CC	
Pacific Spirit Community Health Centre	Park Board - West Point Grey CC	
Raven Song Community Health Centre	Park Board - Britannia CC	
South Community Health Centre	Park Board - Champlain Heights CC	

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