

## Climate change, health & community planning: Co-benefits of climate adaptation

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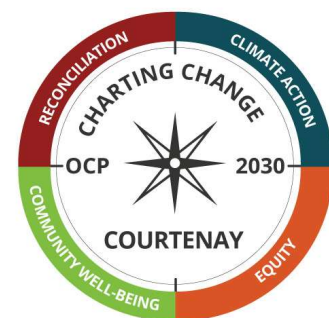


We respectfully and with gratitude acknowledge that we are visiting the unceded territory of K'ómoks Nation



## Our support to the municipal plans & priorities

- Prioritize infrastructure investment using a multiple bottom line decision-making approach based generally on the following parameters and priorities:
  - b. Public health and safety;
  - c. Environmental responsibility.
- Community well-being is a cardinal direction of the OCP which recognizes the social determinants of health as a guiding and systemic framework
- Take actions to address public health and environmental issues as they are identified and, where possible, before they arise.



### Municipal Corporate Climate Action Themes

5. Protect and restore *natural assets* on municipal land
6. Include climate adaptation considerations in all municipal infrastructure

# Vancouver Island climate health challenges

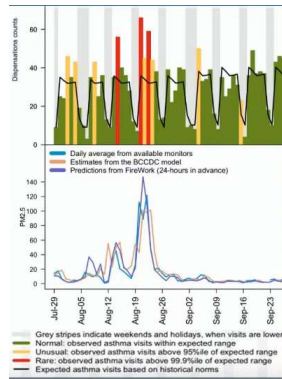
## E.g. Heat dome in 2021:

- 48 heat-related deaths on Vancouver Island between 25/6 - 1/7 in 2021 (one week)
- 92% of deaths in adults 60+ years
- Majority of deaths inside a residence (96%)



→ **16% of water systems have experienced water shortages**

Vancouver Island Drinking Water Operator Survey 2021

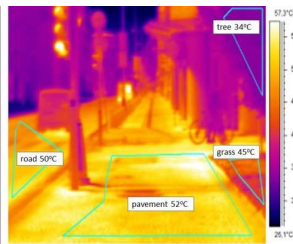


## Extremes

- Days per year over 25°C are expected to occur nearly three times as often by 2050s. *BASELINE of 11 days per year*
- Days per year over 30°C are expected to occur six times as often by 2050s.<sup>81</sup> *BASELINE of 1 day per year*
- 12% increase (+ 4°C) in "1-in-20 hottest day" temperature by 2050s.<sup>82</sup> *BASELINE of 32°C*
- Increase in frequency and magnitude of extreme rainfall.
- Days with heavy rain<sup>83</sup> are expected to occur up to 20% more often by 2050s.
- 27% more of the rain falling will fall in heavy rain events by 2050s.



# How is community planning connected to climate change impacts on health?



(Pokorny et al. 2018)



(<https://www.bizjournals.com/portland/blog/sbo/2014/01/world-cities-looking-to-portland-for.html>)

## Examples:

- Heat impacts on health: Cooling, air purifying & mental health effects of trees
- Pollution/ mold impacts on health: Bioswales reduce strain on a city's municipal sewer system & limiting storm water pollution



## Quick-fixes

For long-term solutions

- Indoor and outdoor shades
- Windows (E.g. Spectrally selective low-E glass)
- Heat pumps with air conditioning

Critical short-term solutions

- Cooling spaces (incl. transportation to them)
  - Multiple brief cooling opportunities
- Availability of drinking water



“In older homes, windows are often one of the largest sources of heat loss in winter, due to air leakage and the windows' low insulating qualities. Windows are also the major source of unwanted heat gain in the summer.”

<https://www.hgtv.com/design/remodel/mechanical-systems/the-best-window-for-a-mixed-climate>

## Long-term systemic plans

- Chronic disease prevention
- Infectious disease prevention
- Mental health
- Community resiliency through infrastructure facilitated interaction & increased sense of community

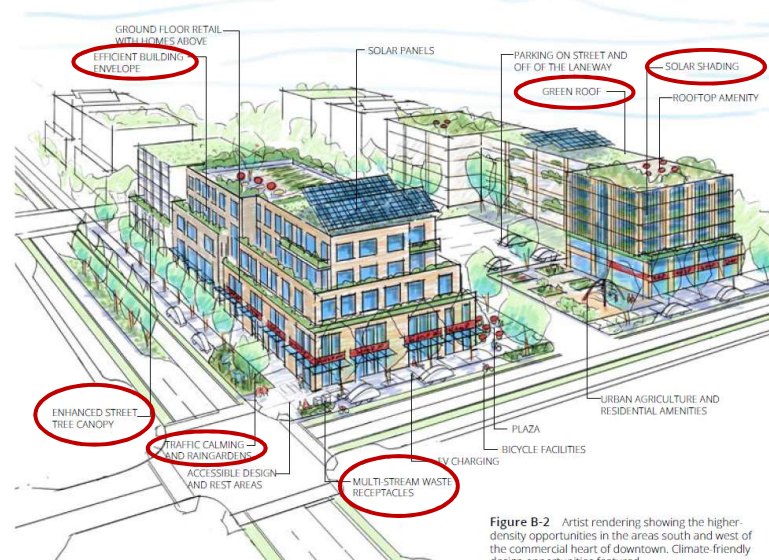


Figure B-2 Artist rendering showing the higher-density opportunities in the areas south and west of the commercial heart of downtown. Climate-friendly design opportunities featured.

## Co-benefits

- E.g. planting trees & increasing green spaces:
  - ✓ Reduced temperature/increased shade
  - ✓ Reduced air pollution/increased air quality
  - ✓ Reduced water pollution
  - ✓ Improves the viability of local businesses
  - ✓ Mental health
  - ✓ Strengthens local biodiversity
  - ✓ Carbon sinks
  - ✓ Strengthens social cohesion & connectedness
  - ✓ More attractive to tourists and other visitors (incl. current & potential new residents)
  - ✓ Children's environmental health (positive impacts on learning & other aspects of child development)
  - ✓ Improves healing, recovery & overall well-being



### Food for thought:

- Diverse trees
  - Resiliency/sustainability
  - Fruit-carrying trees
  - Pollen
- Combination of trees & drought tolerant and/or fertilizing plants (local species)
  - Rain gardens
  - Nutrition
  - Regeneration/reduced watering needs
- Addressing forest fire concerns
  - Density
  - Removal of excessive twigs & dried leaves
  - Fire resistant species



## How can we best work together?

- Advisory Committee for our Climate Change & Health Program
  - ✓ Climate Health Community Forum
- What are your existing strengths?
- What are your needs re climate impacts on health & strengthening community resiliency?



**Health checks during extreme heat events**  
A guide for doing in-person or remote health checks



COMOX VALLEY  
COMMUNITY  
HEALTH  
NETWORK



Mental illness or cognitive impairment  
 Chronic disease  
 Conditions such as schizophrenia, depression, anxiety, and dementia can reduce awareness of heat-related risks.  
 Chronic diseases such as diabetes, heart disease, respiratory disease, and cancer can limit the body's ability to cool.

## Contact

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