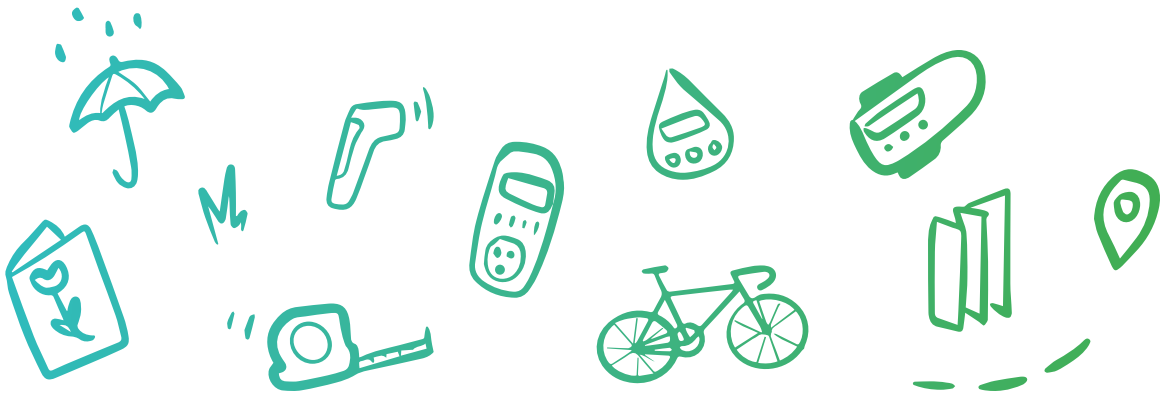
Start Here!

# Climate Action TO-GO

## Activity Guide



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CRD

Making a difference...together

## TERRITORIAL ACKNOWLEDGMENT

The Capital Regional District conducts its business within the Territories of many First Nations, including but not limited to BOḰEĆEN (Pauquachin), MÁLEXEŁ (Malahat), P'a:chi:da?aht (Pacheedaht), Pune'laxutth' (Penelekut), Sc'ianew (Beecher Bay), Songhees, SŦÁUTW̱ (Tsawout), T'Sou-ke, W̱JOŁEŁP (Tsartlip), W̱SIKEM (Tseycum), and xʷsepsəm (Esquimalt), all of whom have a long-standing relationship with the land and waters from time immemorial that continues to this day.

### Please take care of this kit!

Ensure that all items are returned in good condition and any defects, missing items, or dead batteries are reported to the library when you return the kit. Thank you for helping to ensure that these tools remain available for all residents!

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# Welcome to Your Climate Action To-Go Kit!

This kit contains tools and resources to help you take meaningful action on climate change at home and in your community. The tools and activities provided can:

- **help reduce your greenhouse gas (GHG) emissions**
- **help you save money on energy and water bills**
- **help prepare your community for the impacts of climate change**

Addressing a big problem like climate change can feel daunting, but individual actions, when multiplied, can create significant change. Taking action to reduce our energy consumption and fossil fuel use, increase renewable energy supply and adapt to climate impacts are important ways we can be a part of the local and global climate solution.

For an interactive copy of this Guidebook, and to view the most up-to-date resources, visit www.crd.bc.ca/actionkits

### This kit is brought to you by the Capital Regional District

The Capital Regional District (CRD) has a long history of climate action and works closely with the region's local governments to advance key climate priorities in collaboration. To learn more about what the CRD is doing to take action on climate change, visit www.crd.bc.ca/climate

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Tune up your bike! Measure and fill your tires to their desired air pressure making it easier to ride—then use the CRD bike map to find a route that fits your riding style, from quiet trails to streets with bike lanes.

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Measure how much electricity your household appliances and other electronic devices use. Find out what is drawing power even when it's not in use and see where you could be saving both energy and money.

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Challenge yourself and others to limit shower time to a maximum of five minutes to reduce water use and save energy and money. Learn how to test your showerhead's efficiency for even more savings!

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Learn which materials are recyclable in the capital region and how best to recycle them. Two recycling guides are included, follow the one that best suits your needs depending on if you live in a single-family dwelling with CRD blue box recycling collection, or if you live in a multi-family building with communal waste sorting bins.

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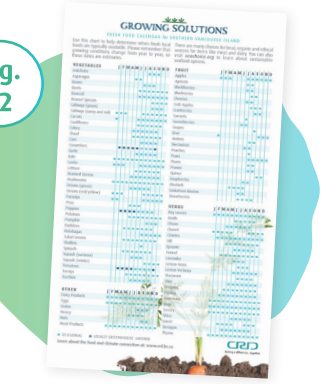


## Growing Solutions: Fresh Food Calendar

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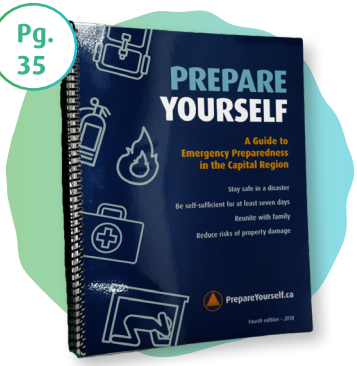


## Prepare Yourself: Guide To Emergency Preparedness

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## Capital Region Species Identification Guide

From plants and animals to lichens and fungi, explore the diverse life found in our region with help from this species identification guide developed by CRD Regional Parks.

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Use this 3-in-1 soil meter to measure the soil moisture, pH and sunlight conditions of your outdoor space. Then use the Habitat Acquisition Trust's "Gardening with Native Plants" Guide to help enhance your outdoor space and support local biodiversity in a changing climate by learning which native plants are best suited for your space.

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## PreparedBC: Extreme Heat Preparedness Guide

Learn more about our local risks and how to make a plan to stay safe during an extreme heat event.

# What is Climate Change?

Climate change is the long-term alteration of the Earth's climate patterns and is primarily driven by human activities like burning fossil fuels (gasoline, diesel, natural gas, heating oil and propane) for energy and transportation. When we burn fossil fuels, we release greenhouse gases (GHGs), such as carbon dioxide and methane, into the atmosphere. These gases act like a blanket, trapping heat in the atmosphere and contributing to the overall warming of the planet – known as the greenhouse effect (see Figure 1).

While the greenhouse effect is a natural phenomenon that helps maintain the Earth's temperature and sustain life on the planet, human activities are impacting this natural process. Since the late 19th century, human activities have caused GHGs to increase drastically, leading to a global average temperature rise of over 1°C. At least another 2°C of warming is expected by the end of this century, unless we act now to reduce GHG emissions.

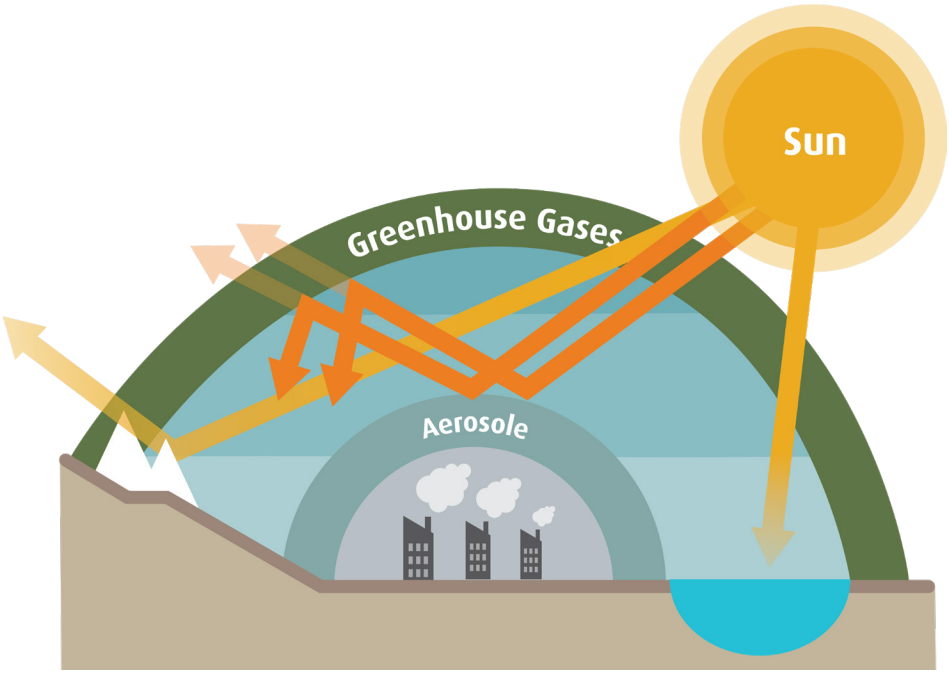



*Figure 1: Illustration of the greenhouse effect.*

# What are the Impacts of Climate Change?

The capital region is already experiencing impacts from climate change. Locally, we are seeing more frequent and intense droughts, wildfires, rainfall, heat waves, and storms. These impacts are likely to persist and, in many cases, intensify over the coming decades, but the more we reduce our GHG emissions, the less climate change we will experience.

Hotter summer temperatures, with more extreme heat days and heatwaves.

Less rain and more dry days in the summer months.

Warmer winter temperatures, less frequent frost, and less snowfall.

More precipitation falling in fall, winter and spring.

Longer-lasting and more frequent extreme rainfall events.

*Figure 2: Projected climate impacts for the capital region. Source: Climate Projections for the Capital Region (2024)*

## Disproportionate Climate Impacts

Climate change affects everyone, but it disproportionately impacts marginalized communities, including Indigenous, Black, Racialized, low-income, 2SLGBTQI+, and women. Vulnerable groups like those with health conditions, disabilities, young children, older adults, and those facing poverty or discrimination are particularly at risk. These populations often have limited resources to prepare for climate change and are more likely to live in areas with higher exposure to climate impacts like in older buildings with limited cooling options during heatwaves.[1] Consider these factors when supporting climate action in your community.

[1]*Government of Canada. (2023). Canada's National Adaptation Strategy: Building Resilient Communities and a Strong Economy. Retrieved from* https://publications.gc.ca/collections/collection_2023/eccc/en4/En4-544-2023-eng.pdf

# What is Climate Action?

Climate action is any effort taken to address climate change and lessen its negative impacts. Climate action usually involves two main concepts, that can sometimes overlap: climate mitigation and adaptation.

**Climate Mitigation** involves reducing or preventing the emission of GHGs into the atmosphere, such as switching from a gas car to an electric one.

**Climate Adaptation** is the process of adjusting to the current and future effects of climate change such as restoring a wetland to help protect against flooding.

Many examples of climate action contribute to both climate mitigation and adaptation. For example, planting trees not only removes carbon dioxide from the air but also offers shade, which helps lower temperatures in the surrounding area.

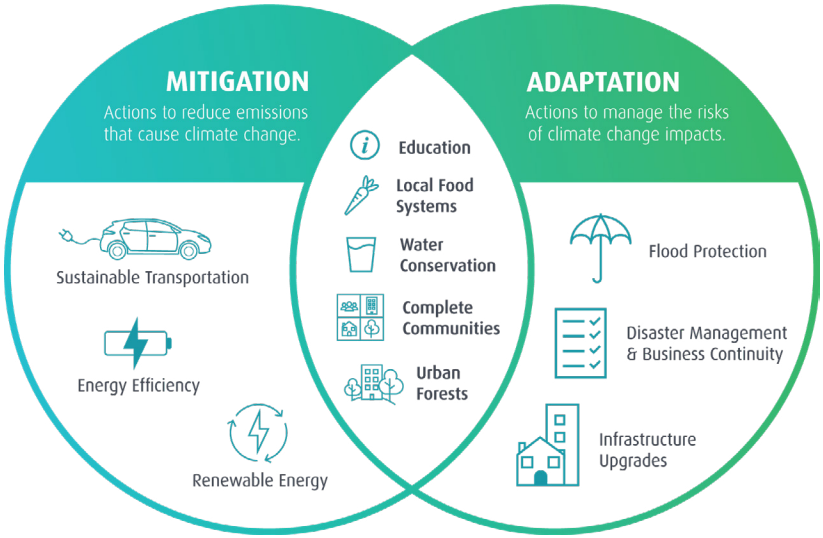



*Figure 3: Examples of climate mitigation, climate adaptation, or both.*

Ensuring that we're reducing our region's GHG emissions, while also preparing our communities for the changes that have already begun, will require collaboration and collective action among all levels of government, First Nations, businesses, institutions, organizations, and **residents like you.**

# Reducing Emissions

Each year residents, businesses and visitors in the capital region consume enough energy to emit over 1.86 million tonnes of carbon dioxide equivalents (CO2e) into the atmosphere. Over 75% of the region's GHG emissions come from two main sources: transportation, such as gasoline and diesel to power our vehicles, and buildings, such as natural gas and heating oil to heat our homes.

While all actions to help mitigate and adapt to climate change are important, this kit will largely focus on tackling emissions from those larger sources: transportation, buildings and waste, as well as preparing and adapting for the changing climate.

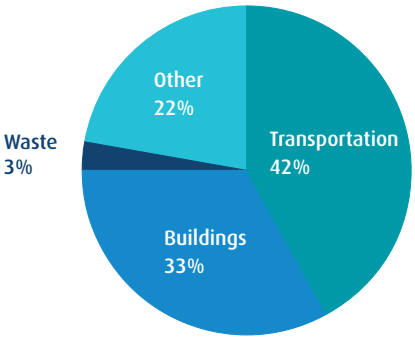



*Figure 4: Sources of greenhouse gas emissions in the capital region. Source: 2022 Regional GHG Emissions Inventory Report*

### Three key ways to reduce GHG emissions:

- Shift how we get around (walking, biking, public transit, electric vehicles, car shares etc.).
- Change how we heat and power our buildings (improve energy efficiency, switch to renewable energy sources like electric heat pumps).
- Reduce waste and choose lower impact food and goods.

## Calculating Your Carbon Footprint

The District of Saanich's Carbon Calculator is a handy tool to estimate your household's current GHG emissions and help you identify ways you can reduce them. It can be found at www.saanich.ca/calculator

You can also use the calculator to compare the impact of different climate actions (e.g. will I reduce my emissions more by swapping a natural gas furnace for a heat pump or taking transit instead of driving?).

***Note:*** *It's easier for high emitters to reduce their carbon footprint than those with a small footprint. For example, frequent flyers can cut emissions by vacationing locally, while those living a subsistence lifestyle (living on the bare minimum food, water and lodging to survive) may find it harder to further reduce their emissions. Recognizing these differences is essential for an inclusive and just approach to taking action on climate change.*

# Transportation

The biggest source of GHG emissions in the capital region is on-road transportation, which in 2022 accounted for approximately 42% of our region's emissions. Depending on where you live and your lifestyle, transportation may be one of the areas of your life where you can make the biggest reductions. See Figure 5 for a comparison of emissions from the different modes of transportation.

Replacing vehicle use with walking, biking or e-biking, wheeling and public transit are ways to significantly reduce GHG emissions. Of course, how we move around is often directly linked to how communities around us have been built, what economic and social factors come into play in our lives, and what health and accessibility status we experience.

The design of your neighbourhood, safety and accessibility of trails and sidewalks, and your level of access to fast, frequent, and reliable public transit all directly impact your ability to choose low-carbon, active transportation modes. If walking, biking or taking transit isn't currently an option for you, consider reducing your transportation emissions by carpooling with friends, family or colleagues, and switching to an electric vehicle at your next available opportunity.

For more information on electric vehicles and e-bikes, including available rebates, visit: [www.crd.bc.ca/charge](www.crd.bc.ca/charge)

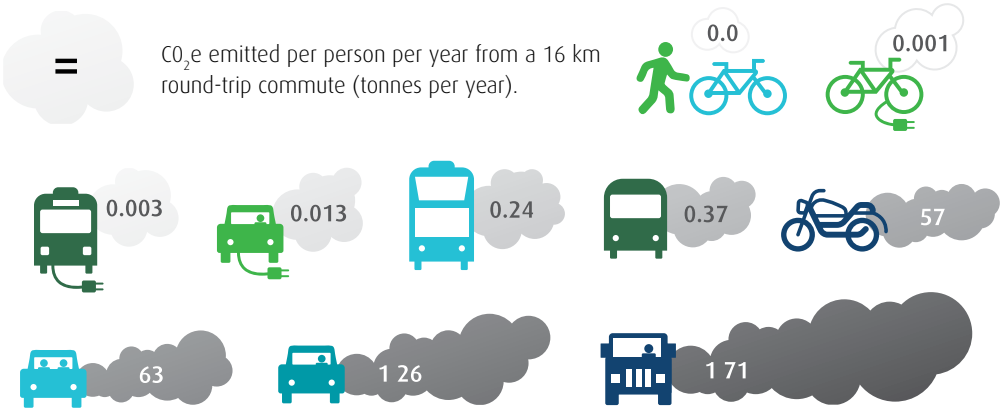



*Figure 5: GHG emissions compared for various modes of transportation.*

## Did you know?

The CRD Origin Destination Household Travel Survey is updated every five years to help profile travel patterns in the region, including where residents travel, the purpose of trips, and the modes of transportation used. The results from the 2022 survey include:

- A 10% decrease in total personal trips, even amidst a 9% growth in population in the region.
- A rise in active transportation, with 29% of trips made by walking, cycling and transit use, up from the 2017 mode share of 26.6%.
- A significant increase in the number of electric vehicles across the region.
- Bike trips taken by e-bikes rising to 11% of all adult bikes, but accounting for 30% of all bike trips.

**Keep up the good work!**


*CRD summer staff taking their electric bikes out for a spin.*

# Tools & Activities for Reducing Transportation-Related Emissions


## Pedometer & Tape Measure

Whenever possible, switching to walking can increase personal physical activity, lower GHG emissions, and reduce future climate impacts. Walking is the simplest form of exercise that can provide many benefits for your well-being. Using a pedometer, smartwatch, or step-tracking app, is a great way to help you visualize your progress.

### *ACTIVITIES FOR THE PEDOMETER*

1. **Challenge yourself and compete against your friends or family to reach 10,000 steps each day for one week.**
2. **Shift your mode.** Can you think of any trips or errands that you could do on foot instead of with your car?
3. **Draw a community map.** Use the pedometer to measure distance in steps to all your favourite places and community features. Is anything closer than you thought? Did you discover a new way to get there?
4. **Visit a regional park.** Visit a local trail or park and enjoy the beautiful nature around us. There are many trails that are accessible for people of all ages and abilities. For more information on visiting one of CRD's 33 regional parks and four regional trails, visit www.crd.bc.ca/parks

## *HOW TO USE PEDOMETER AND TAPE MEASURE*

### Determine your Stride Length:

- Set up the tape measure along the floor.
- Beside the tape measure, with your toe starting at the zero, walk three steps with your normal stride.
- Measure the distance from the first step's toe to the third step's toe.
- Divide the total distance by three. Example: total distance = 183 cm, therefore 183 ÷ 3 = 61 cm stride length.

**Note:** An average walking stride for a female is 61 cm and a male is 76 cm.

### Setting up the Pedometer

To get started, press and hold any button until "inch and cm" start flashing.

1. Use the triangle buttons to select centimeters (cm)
2. Press the circle button to confirm.
3. Repeat these steps as the pedometer presents options for:
    - km or mile (select km)
    - 24 or 12h time
    - Stride length
    - Hour
    - Minute

***Time must be set correctly.*** *The unit stores 7 days of measurements for steps and distance. The current day's data is automatically stored in memory when the time reaches 12:00AM (0:00) The display will return to zero.*

### Viewing Stored Data

The unit stores seven days of measurements for steps and distance. The current day's data is automatically stored in memory when the time reaches 12:00AM (0:00). The display will return to zero.

- Press MODE to select the type of measurement you want to see (steps or distance)
- Press MEM to view the results (days 1-7) in memory

***Note:*** *If no button is pressed for more than 1 minute, the display will return to the current day's data.*

***Battery Saving Mode:*** *After five minutes with no button being pressed, the display will automatically turn off. However, the unit continues counting steps.*


# Bike Pump and Bike Map

A shift from driving to active travel like cycling can not only help reduce our climate impact, it also helps to reduce traffic congestion. Use the information and tools provided in this section to tune up your bike and get prepared to ride safely and confidently!

## *ACTIVITIES FOR THE BIKE PUMP & BIKE MAP*

The bike pump is perfect for inflating bicycle tires. The reversible head with thumb lock works on all valve types, so regardless of your bike's design this pump should work for you. The pump also has a gauge to allow users to fill their tires to their desired pressure making it easier to ride, meaning you will use less energy and feel less tired after riding your bike!

The CRD bike map is a useful tool that will help you choose a route to fit your riding style. Choose from quiet trails to streets with bike lanes to get to your chosen destination.

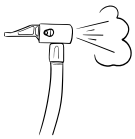
### The ABCs of Bike Maintenance:

Before you take your bike out, make sure it is ready to ride. Check the ABCs of your bike before each ride:

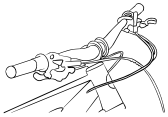
### The Bike Map features:

- Pathways and bike routes from Sidney to Sooke and beyond
- A comfort level index that helps riders choose more comfortable and pleasant routes
- Informative legend distinguishing the type of route/ trail surface
- Bikeway sign and symbol explanations

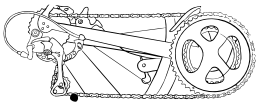
To view the most up-to-date digital version of the CRD Bike or map or find a pick-up location for a free print copy of the map, visit: www.crd.bc.ca/bike



**AIR:** Check both tires to make sure they are filled with air. If they are squishy like a banana, pump them up! Tires should be firm for safe, fast and easy riding.



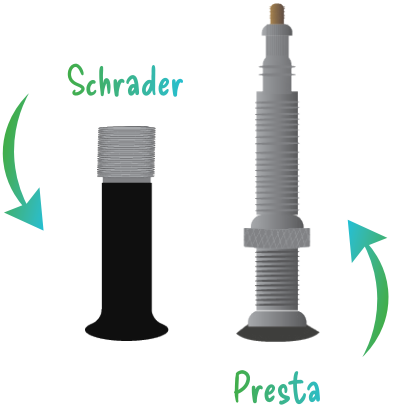
**BRAKES AND BARS:** Check your front and back brakes to make sure you can come to a quick stop. Check that the handlebars are stable.



**CHAIN:** Lubricating your chain prevents it from falling off and ensures smooth gear changes. If your chain squeaks while pedaling, it likely needs lubrication.

## *HOW TO USE THE BIKE PUMP & BIKE MAP:*

- Check the wall of your tire for the suggested tire pressure (PSI).
- To use the bike pump and gauge:
  a. Attach the hose (magnetic head)
  b. Push open the black handle until it is perpendicular to the pump
  c. Choose the right valve adapter:
  d. Attach the hose to your bike valve and start pumping.
  e. Check the gauge on the pump which shows the air pressure of your tire. Inflate to a pressure that best suits your needs, up to the suggested tire pressure.
- Use the CRD bike map to identify the most comfortable route to your favourite destinations.




*There are two kinds of valves on bike tires: Schrader (traditional) or Presta (small and skinny).The blue part on the pump is labeled Schrader or Presta. If it doesn't match your bike tire, unscrew it and screw it in the opposite way.*

*Bikers on the Galloping Goose Trail*

**Safety Tips:**

- Wear a helmet and make sure it fits
- Add a bell or horn to your bike
- Install a front white light and rear red light dark days and nights
- Put reflectors and reflective tape on your helmet, clothes and bicycle to increase visibility
- If you're still feeling unsure about hopping on a bike, consider attending one of the many bike skills and safety courses offered in the region

# Additional Transportation-Related Activities

**Travel/Trip Diary**

Track how you get around for a week. Include the mode of transportation, how far you traveled, how long it took to get there, and whether you traveled alone or with other people (if using a vehicle).

- Create a chart like the one below, or download a fill-in-the-blanks version of the Climate Action To-Go Kit Guidebook at www.crd.bc.ca/actionkits
- Travel to and from your destination then write your results down in your Travel Diary chart.
- Reflect each day on how traveling in this way felt, and whether you could shift from gas-powered vehicle to active travel like walking or biking, or public transit.

| | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---|---|---|---|---|---|---|---|
| Mode | Car | Bike | Carpool | Walk | Car | Bike | Ride Share |
| Travel Time | 40 Minutes | 20 Minutes | 40 Minutes | 10 Minutes | 40 Minutes | 30 Minutes | 30 Minutes |
| Travel Distance | 30 km | 7 km | 30 km | 1 km | 30 km | 10 km | 5 km |

*Consider riding your bike for your next commute - how long would it take you vs. other modes of transport?*

## Did you know?

According to the 2022 CRD Origin-Destination Survey, this is how K-12 students in the region are traveling to and from school in the capital region:

- 41% of trips are made by car
- 24% by walking
- 10% by transit
- 10% by cycling
- 15% by other modes

Using active transportation to and from school, instead of commuting by car, reduces GHG emissions and builds physical activity into kids' daily routine, supports in-class concentration, provides a foundation for healthy lifestyles, and fosters a greater sense of community.

Visit www.crd.bc.ca/walkwheel for all the information you need to host a Walk & Wheel event at your school or workplace!

**Plan a Local Vacation For Your Family.**

Vacations, especially those that involve traveling far away by car, ferry, or plane, have a large carbon footprint. Your family can reduce GHG emissions by choosing to vacation closer to home.

- Research and list a few ideas for family vacations that are relatively close to home.
- Use Saanich's Carbon Calculator to compare the emissions from your local trip to somewhere farther away, such as a trip to Mexico or Hawaii. Did your local vacation help reduce your emissions? By how much? Find the calculator at: www.saanich.ca/calculator

**Want to learn more about EVs?**

For the latest details on electric vehicle models, available rebates and incentives, EV charging resources, and a cost calculator for electric vs. gas cars, visit: electricvehicles.bchydro.com

For additional transportation resources, visit www.crd.bc.ca/actionkits

# Buildings

After transportation, buildings are the second highest source of GHG emissions in the region. Energy use in buildings accounts for roughly one-third of our GHG emissions - mostly a result of using fossil fuels such as natural gas, heating oil, and propane for space and water heating, as well as low levels of energy efficiency in many homes.

A great way to reduce our GHG emissions at home is by switching to electricity to heat our homes, and improving the energy efficiency of our homes. See Figure 6 for a side-by-side comparison of the GHG emissions from different home heating systems. In BC, we are fortunate to have a clean power grid served by 98% renewable energy. The vast majority of this is through hydroelectric facilities, along with a small portion from other clean sources like wind, solar and biomass. Learn more at [www.bchydro.com/powersmart](www.bchydro.com/powersmart)

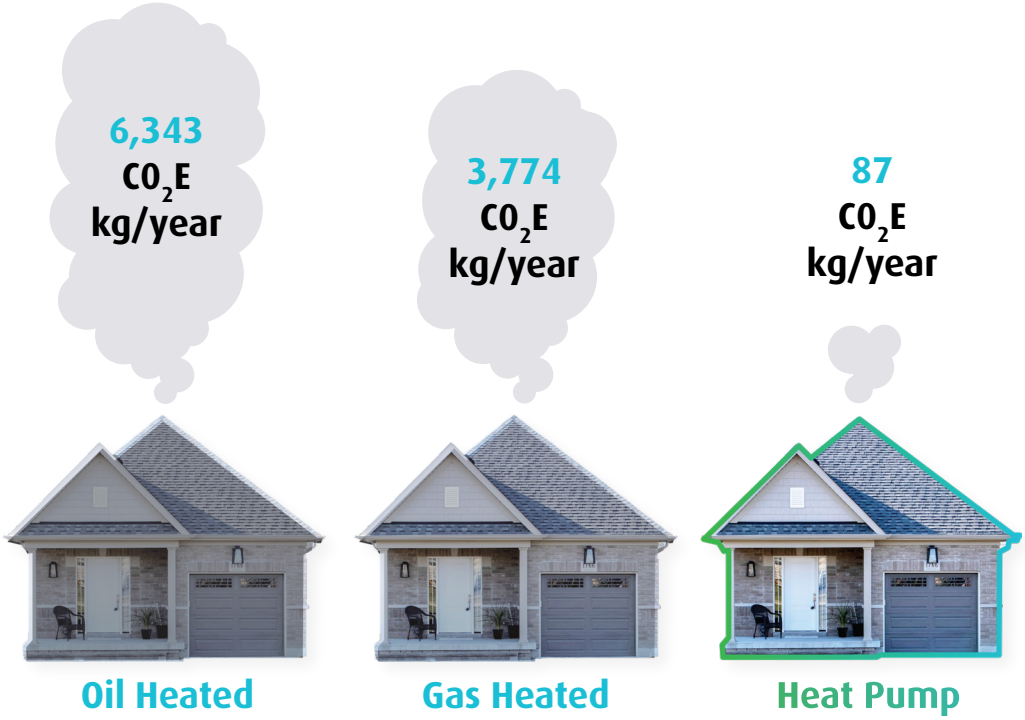



*Figure 6: GHG emissions associated with different types of home heating systems.*

# You can help reduce GHG emissions at home by:

**Improving Energy Efficiency:**

Improving home energy efficiency saves money and boosts comfort year-round. Actions like draft-proofing, air sealing, upgrading windows, doors, and appliances, and adding insulation can significantly help.

**Switching to Electricity:**

To reduce home emissions, switch to electric heat pumps and water heaters, moving away from fossil fuels such as natural gas, heating oil, and propane.

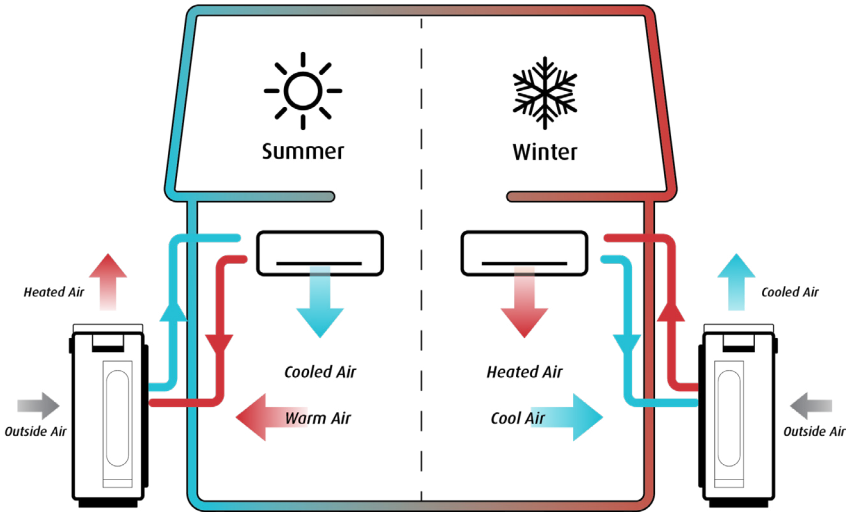



*Figure 7: Diagram of a heat pump system, illustrating how it works to keep your home warm in the winter, and cool in the summer.*

## Did you know?

Heat pumps efficiently heat your home in winter and cool it in summer by transferring heat between indoors and outdoors (see Figure 7). They reduce energy bills, improve air quality, and increase home value. Government and utility rebates can help cover upgrade costs.

Visit www.crd.bc.ca/heatpump to learn more.

# Tools & Activities for Reducing Building-Related Emissions


## Thermal Leak Detector

The TLD100 thermal leak detector uses an infrared sensor to find leaks along walls, molding, ductwork and more. The automatic color change feature provides quick feedback, showing you where to seal leaks with caulking, insulation or weather stripping. Try it out to see where you can target repairs to save energy, money and increase your home heating comfort!

### *ACTIVITIES FOR THE THERMAL LEAK DETECTOR:*

- Scan around a light fixture to determine if ceiling insulation was removed during installation.
- Scan along window and door sills to see where to add weather-stripping.
- Scan where a wall and the floor meet to find drafts that should be caulked.
- Scan an attic door to see if you need to add insulation.
- Scan along your electrical outlets to see if you need to add insulation.

***Note:*** *It is best to scan your home when there is the potential for the greatest temperature difference between the inside and the outside your home. Try the detector early in the morning or late at night.*

### Did you know?

In many homes, up to 20% of heat is lost through leaks and poor ventilation. Properly insulating your home and sealing air leaks can prevent heat loss in winter and keep cool air inside during the summer, reducing the need for excessive heating or cooling and saving you money.

## *HOW TO USE THE THERMAL LEAK DETECTOR:*

1. Insert the battery.
2. Hold the device and aim beside the location you want to scan for a draft or thermal leak. This initial aim point will be your reference target.
3. Press the ON/OFF button to turn the unit on.
4. Keep the unit aimed at the reference target until the green light shines on the target and a Reference Temperature appears on the screen.
5. Slowly scan the thermal leak detector across the area of interest. If the scanned temperature is hotter than the reference temperature by more than the threshold, the light will turn from green to red. If the scanned temperature is colder than the reference temperature by more than the threshold, the light will turn from green to blue. The two temperatures will also show on the screen.
6. Once finished, press the ON/OFF button to turn the unit off.
7. Remove the battery and place it back in the storage container.

### Safety Instructions

- Do not shine infrared laser in eyes.
- Do not use for medical or food preparation purposes.
- Do not operate the Thermal Leak Detector in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- Use only with the specifically designated batteries (9V alkaline). Use of any other batteries may create a risk of fire.
- Keep batteries out of reach of children.

**Please contact your local library if the battery requires replacement.*

### Found air leaks using the thermal leak detector? Consider these next steps!

- Check out the CRD's Home Energy Navigator program for free home energy upgrade guidance and support: Visit www.homeenergynav.ca or call 1.866.381.9995 to get started.
- Consider borrowing one of the new Thermal Imaging Camera Kits from your local public library. The FLIR C3-X thermal camera can help take your thermal leak detection skills to the next level.
- Visit www.bchydro.com/powersmart for energy-saving tips, rebates information, and tutorials for draft-proofing your home.

***Note:*** *Shiny or polished surfaces can give inaccurate readings. To compensate for this, cover the surface with masking tape. The thermometer cannot measure through transparent surfaces such as glass or plastic. It will measure the surface temperature instead.*


# Kill-A-Watt Electricity Meter

Electronics can add up to a big impact – especially when they are left on or plugged in. This Kill-A-Watt meter will allow you to measure how much electricity your appliances and electronics consume, even when not in use.

## *ACTIVITIES FOR THE KILL-A-WATT METER:*

1. **Check the energy consumption levels of your most common household items.** Keep items plugged into the meter for an hour, a day, or a week! Some device ideas include:

   - Hair dryer
   - TV
   - Air conditioner
   - Fan
   - Microwave
   - Refrigerator or freezer
   - Desktop computer or laptop
   - Phone charger
   - Washing machine or dryer
   - Gaming consoles

2. **Eliminate phantom power.** Many electronic devices continue to use power even when they are not being used. Devices such as computers, modems, televisions, and gaming consoles often consume electricity in "standby mode."

   - You can stop phantom loads by plugging your devices into a power bar and switching the power bar off. Plug the power bar into the Kill-A-Watt device and see the savings!

3. **Calculate the costs.** Using the data provided by the Kill-A-Watt meter, you can calculate a device's total energy use and how much it costs to run in your home. Energy is billed per kilowatt-hour, so:

   - Cost of electricity = kilowatt-hour meter reading (the value obtained by pressing the KWH/ Hour button once) x the rate you pay for electricity.
   - Annual cost of appliance = watt reading /1,000 x number of hours you use the appliance per week x 52 weeks in a year x the rate.

***Note:*** *You can check the current rates on your hydro bill.*

## *HOW TO USE THE KILL-A-WATT DETECTOR:*

1. Plug the Kill-A-Watt meter into an electrical socket, then plug in the electrical device that you want to measure. You may find it easier to use a small extension cord for better viewing. As always, use caution around electricity.
    - The LCD screen will show a variety of meter readings: volts, current, watts, frequency (Hz) and power factor (VA). As soon as the device is plugged in, the unit will start to accumulate KWH and time.
    - Press the Watt/VA button to get an instant reading of the amount of watts the device is drawing. Turn your device on and off to see if the device continues to draw power. If so, this is an example of a 'phantom load' where an electronic device uses energy even when it is turned off.
2. Press the KWH/Hour button once to show the cumulative energy consumption since the device has. been plugged in. Press this button again to see the amount of time your device has been plugged in.
3. The longer you leave a device plugged in, the more accurate the electricity consumption measurement is for both watts and KWH. To accurately measure the consumption of larger devices like refrigerators, leave the appliance plugged into the Kill-A-Watt for a few days at least.

**Note:** *All data will be lost when the meter is unplugged. Make sure that you do not unplug the appliance until you have read the meter and recorded your results!*

*Are your electronics using phantom power? Consider a powerbar you can switch on and off to save energy.*


# Shower Timer

Hot water can account for up to 17% of household energy costs, with showers often being the biggest contributor – regardless of whether water is heated with natural gas or electricity. Limiting showers to five minutes can save water, energy, and money, especially when using a high-efficiency showerhead. Use a timer to track your shower time.

## *ACTIVITIES FOR THE SHOWER TIMER:*

**Challenge yourself, and others in your household, to strive for five minute showers (or less)!**

a. Place the timer where it will stay dry.

b. Using the above steps, set the timer for 5 minutes. Did you complete the shower before the alarm went off? Keep track of your time to see if you can beat it next time.

c. Challenge a friend or family member to do the same.

## *HOW TO USE SHOWER TIMER:*

1. Press M (minute) button five times (or less for an even shorter shower)
2. Press ST/SP button to start the timer.
3. Press ST/SP button to stop timer or alarm (alarm will also turn off after 30 seconds).

## Did you know?

By making water wise choices, we can also help delay costly infrastructure upgrades, make sure there is enough drinking water for the year for a growing population, support healthy ecosystems, and ensure we have the flexibility to deal with the effects of climate change such as increased droughts. Maintaining this critical resource requires each of us to make water wise choices each and every day.

**Checking Showerhead Flow Rate:**

a. To measure how many litres per minute your current showerhead is using, place a container/measuring jug under your showerhead.

b. Turn the shower faucet on full and run the water into the bucket for 10 seconds.

c. After 10 seconds, measure the volume of water. Multiply your measurement by six to get the amount of water flow per minute. For example, if you ran your shower for 10 seconds and captured 1.9 L of water in your bucket, your showerhead would have a flow rate of over 11.4 L/min.

d. If you have a flow rate of more than 7.6 L/min, consider replacing your showerhead with a high-efficiency model start saving more energy, water and money.

e. How many litres of water does your showerhead use for a 5 minute shower? _____ (litres per minute) x 5 = _____.

## Additional Building-Related Activities

- Upgrade your home with help from the CRD's Home Energy Navigator Program. This free program provides support and guidance for homeowners undertaking home energy retrofits in the capital region. Visit www.homeenergynav.ca or call 1.866.381.9995 to get started.
- Visit your municipality's website to look up building requirements, possible rebates and incentives, or financing options for home energy upgrades.

For additional resources related to home energy retrofits and energy and water efficiency, visit www.crd.bc.ca/actionkits

# Waste

What we buy and how we dispose of waste has an impact on GHG emissions. The best thing we can do is reduce our consumption, followed by strategies like reusing and recycling.

One of the significant contributors to waste-related emissions is the decomposition of garbage, especially organic waste like food scraps and yard trimmings. Despite being banned from the landfill since 2015, capital region residents put over 23,000 tonnes of organic material in the garbage in 2022, according to the CRD's Solid Waste Stream Composition Study. To learn more about the CRD's Waste Composition Study visit: www.crd.bc.ca/rethinkwaste

Rather than throwing organic waste in the garbage, place it in your green bin (check with your municipality to see what is accepted), use a backyard composter, or check: www.myrecyclopedia.ca to find your nearest drop-off location.

It is also important to note that while not included in our region's GHG emissions inventory (which is a 'territorial emissions inventory'), a broader 'consumption-based' inventory includes the GHG emissions released to produce the goods and services we enjoy regionally but come from abroad or out of region. This includes things like food.

Our dietary choices have a substantial impact on our consumption-based emissions. Some food items, particularly meat and dairy options, have a much higher GHG impact than plant-based alternatives. Foods grown far away and then transported here also have a lot more emissions associated with them than foods grown locally.

*Hartland landfill*

## 5R Pollution Prevention Hierarchy

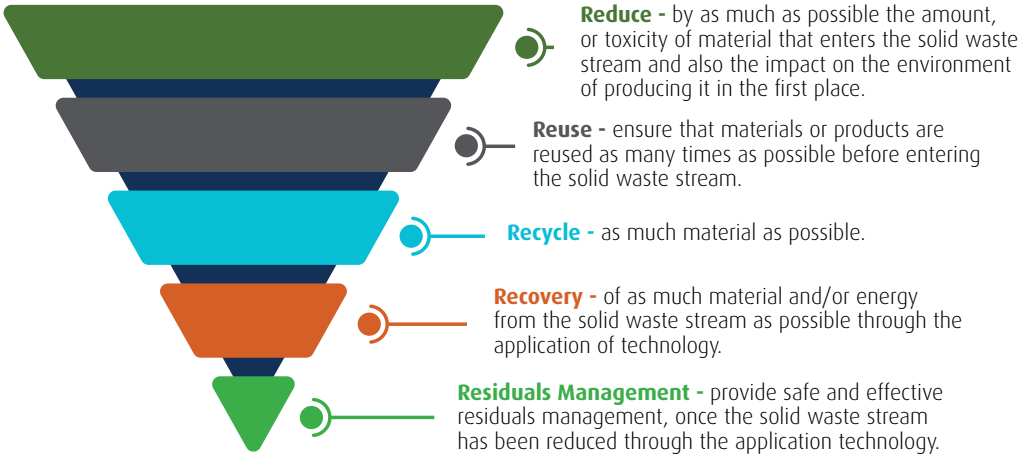



*Figure 8: To reduce waste as much as possible, try following the 5R Pollution Prevention Hierarchy shown above.*

### Quick tips to help reduce waste and waste-related emissions:

- **Reduce food waste:** Plan meals and create grocery lists to buy only what you will consume.
- **Reduce consumption of meat and dairy:** Even choosing to eat a plant-based diet once a week helps!
- **Compost:** Composting unavoidable food waste can further divert it from landfills. Backyard composting or using kitchen scraps bins are excellent options.
- **Borrow, reuse, and repair:** Borrow items from friends or neighbors, buy second-hand, host a neighbourhood-wide garage sale or clothing swap. Repair items when possible instead of discarding them, or attend a Repair Café. Explore rental options and tool libraries.
- **Choose minimal packaging:** Opt for products with minimal packaging, and consider purchasing produce from farmers' markets to reduce unnecessary waste.
- **Recycle:** If items cannot be reused or repurposed, be sure to recycle them properly. Note: If your municipality or building does not provide collection for certain things like food waste, yard and garden materials, or glass bottles and jars, find a recycling location near you at www.myrecyclopedia.ca

# Tools & Activities for Reducing Waste-Related Emissions


## Kitchen Scraps Guide and Recycling Sorting Guide(s)

According to the 2022 Solid Waste Stream Composition Study, almost half of landfill-bound waste could have been diverted through compost or recycling! Are you keeping as much waste out of the landfill as possible? Use the Recycling Sorting Guide and Kitchen Scraps Collection Guide to assess your at-home waste habits.

### *ACTIVITY FOR THE KITCHEN SCRAPS COLLECTION GUIDE AND RECYCLING SORTING GUIDE: HOME GARBAGE AUDIT.*

1. **Set-up your work area.** Depending on what gets thrown in your garbage bin at home you may need to consider different set-ups. If you think you will have messy items (like food scraps) consider putting down a tarp, a towel, or working outside. If you choose to work outside, make sure nothing escapes and becomes litter!

2. **Gather your garbage and recording tools.** Collect garbage from all bins in your house or just focus on one main garbage bin. You will also need something to record your findings. Make your own table using a pencil and paper or in a computer program such as excel, or download a fill-in-the-blanks copy of the Climate Action To-Go Kit at www.crd.bc.ca/actionkits

3. **Categorize your garbage.** Divide everything in your bin into groups and categories using the six categories (food scraps, paper, glass, containers, drop-off or depot and garbage) listed on the table provided on the next page. You will most likely add and shift categories as you go, so take your time.

4. **Record your findings.** Start by writing down each type of item and how many of each were in the garbage (e.g., three coffee filters). Then sort all of your items into their corresponding categories. Refer to the Recycling and Kitchen Scraps Sorting Guides if there are items you're unsure about.

| Item | Food Scraps | Paper or Cardboard (Blue Bag) | Glass | Containers (Blue Box) | Drop off or Deposit | Garbage |
|---|---|---|---|---|---|---|
| Coffee filter and grounds III | ✓ | | | | | |
| Tissue IIII IIII II | | | | | | ✓ |
| Milk carton II | | | | ✓ | | |
| Jam jar I | | | ✓ | | | |
| Fruit stickers IIII II | | | | | | ✓ |
| Yogurt lids II | | | | | ✓ | |
| Chip bag I | | | | | ✓ | |
| Receipt III | | ✓ | | | | |
| Bread bag I | | | | | ✓ | |
| Toothpaste tube I | | | | | | ✓ |
| Banana peel I | ✓ | | | | | |
| Plastic clothing tag IIII | | | | | | ✓ |
| To-go coffee cup II | | | | ✓ | | |
| Ice cream bar wrapper II | | | | | ✓ | |
| Dental floss IIII | | | | | | ✓ |
| Paper towel III | ✓ | | | | | |
| Total items: 50 | 7 | 3 | 1 | 4 | 6 | 29 |

## HOW TO USE THE RECYCLING SORTING GUIDE(S)

There are two recycling guides included in this kit, follow the one that best suits your needs depending on if you live in a single-family dwelling with curbside recycling collection, or if you live in a multi-family building with communal waste sorting bins.

## HOW TO USE THE KITCHEN SCRAPS COLLECTION GUIDE

Use the guide to help keep organic materials out of your garbage. Learn which materials are accepted in your organics bin and which belong in the garbage.


# Growing Solutions Fresh Food Calendar

Understanding the resources that go into producing our meals can make us more aware of the relationship between our food and climate change. Throughout the capital region, people and organizations are taking a new interest in food security. Backyard gardens, edible landscapes, land use policies, food purchasing collectives and food waste composting are just a few examples.

By reducing energy-use associated with food growth and transport, diversifying local food production, local farmers and small-scale producers and processors, we are more likely to achieve our GHG reduction targets and better prepare for future climates.

## *ACTIVITIES FOR THE GROWING SOLUTIONS FRESH FOOD CALENDAR:*

1. Make your favourite meal local.
   - Compare the recipe to the Fresh Food Calendar to find out what produce is grown locally and when.
   - If the produce is not in season at the same time, is it canned or frozen locally? (This will use more energy, but likely less than energy to transport food)
   - Are there other ingredients you could replace with local products?
2. Set up an "ugly" food blind taste test challenge. Can you taste the difference? Choosing misshapen fruits or vegetables can be lighter on the wallet while packing in lots of nutrition and reducing food waste.
3. Visit a local farmer's market or other local food event.
4. Grow your own at home or in a community garden.

## *HOW TO USE THE GROWING SOLUTIONS: FRESH FOOD CALENDAR*

Use this chart to help determine when fresh local foods are typically available. These dates are estimates as growing conditions change from year to year.

1. Find the month, listed along the top of the chart from January (J) through December (D).
2. Find the produce, grouped by category (vegetables, fruit and herbs) and listed alphabetically.

## Additional Waste-Related Activities

- Attend a free public tour of Hartland Landfill. Visit www.crd.bc.ca/events to view and register for upcoming tours.
- Play the CRD's *Ready, Set, Sort!* waste sorting game – it's like the garbage audit but without the mess! Visit https://crd.recycle.game to play.
- Join a local repair café (there are a few in the region) and check out the Victoria Tool Library at www.victoriatoollibrary.org

For additional information on reducing waste and waste-related emissions, visit: www.crd.bc.ca/actionkits

*Panorama Greenglade Community Centre Garden*

# Preparing for Climate Change

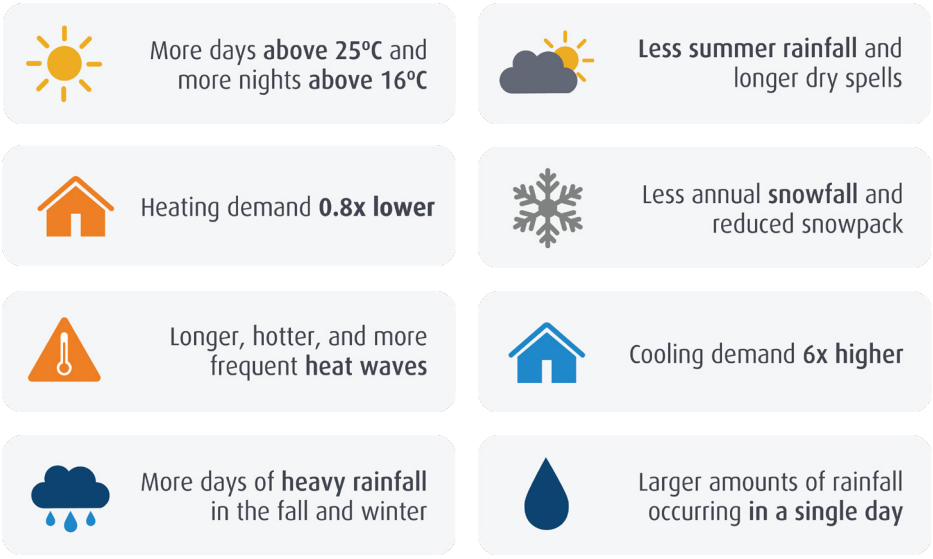
To effectively adapt to the impacts of climate change, we need to improve how we anticipate, respond to, and recover from both extreme weather events and more gradual changes occurring over time. Over the coming decades, the capital region will see longer, hotter and drier summers, wetter winters and more intense and frequent storms. As a coastal community, the capital region will also be impacted by sea-level rise.

Climate adaptation efforts will make our communities more resilient to these changes.

### Examples include:

- Preparing our buildings to be cooler during a heatwaves
- Designing our stormwater infrastructure to reduce flooding and accommodate extreme rainfall events
- Planting drought tolerant, native species in your garden

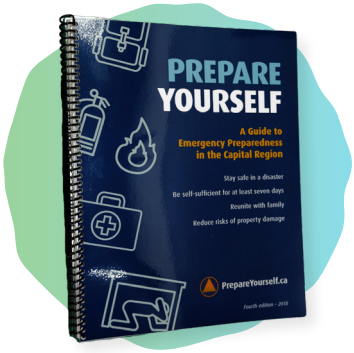
### By the 2050s*, the capital region may experience on average:




*under a high emissions scenario

*Figure 11: Infographic summarizing key climate projections for the 2050s. Source: Climate Projections for the Capital Region (2024),* www.crd.bc.ca/data.

# Tools & Activities for Preparing for Climate Change




## Prepare Yourself: Guide for Emergency Preparedness

Use this guidebook and worksheets to get prepared for emergencies in the capital region. Preparation now will also help us be more resilient to future climate impacts.

### *ACTIVITIES FOR THE PREPARE YOURSELF GUIDE:*

1. Read the guidebook to learn about local risks
2. Make a plan
3. Get an emergency kit:
   - Download the guidebook at www.PrepareYourself.ca
   - Print pages 59-82 (guidebook section 5 worksheets pages 59-82)
   - Photocopy section five worksheets (pages 59-82)
   - Use the step-by-step guide "26 Weeks to Family Emergency Preparedness" (page 81)

### *HOW TO USE THE PREPARE YOURSELF GUIDE:*

Read the guidebook to learn how to prepare for these projected climate impacts:

- wildfires (page 30)
- severe weather (page 26) and power outages (page 28)
- floods and storm surges (page 37)
- landslides (page 39)


# Capital Region Species Identification Guides

We're not the only ones who call the capital region home. In fact, we live in one of the most biologically diverse regions in Canada. From endangered Garry oak ecosystems to intricate marine ecosystems, the capital region teems with a diverse array of flora and fauna.

Biodiversity, crucial for ecosystem function and life's continuity, supports vital services like nutrient cycling, soil formation, and climate regulation. Biodiversity also provides important cultural services, such as research, education, recreational and spiritual benefits. Much of our sense of belonging and heritage comes from our relationship with the landscape and biodiversity that surrounds us.

Yet, climate change poses significant threats, rising temperatures, shifting precipitation patterns, and ocean acidification disrupt habitats and endanger species.

In this activity, we are inviting you to explore your neighbourhood, backyard, or local park and find native plants, and wildlife, as you go. By learning about the amazing biodiversity that surrounds us we can increase awareness and education and help protect these important ecosystems.

*Great blue heron, crab, and camas flower.*

## *ACTIVITY FOR CAPITAL REGION SPECIES IDENTIFICATION GUIDE:*

Explore biodiversity in your neighbourhood.

**1. Choose your guide and decide how to take notes.**

- In this kit we have provided a CRD species identification guide for common native species. Make use of this guide, or a digital app like iNaturalist or Picture This to help you identify native plants as you go. We recommend taking a notepad or typing notes on your phone as you go to keep track of the species you find.

**2. Locate yourself.**

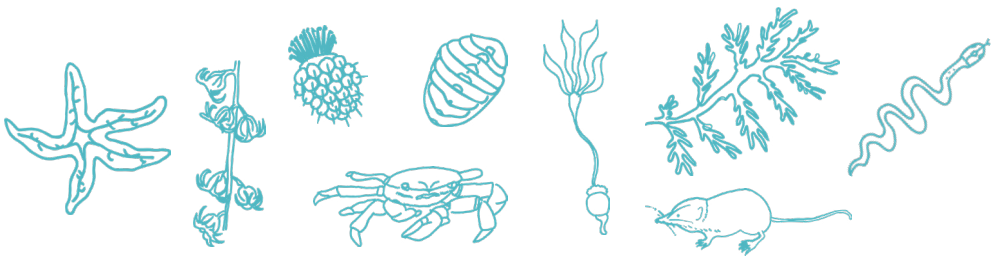
- Before you get started, take a look around you. What kind of location have you chosen for your native species walk? Are you in a shady backyard, or a neighbourhood park? Are you on a roadside, or a sunny beach? Take notes in your notebook. Compare this information between sites and time of year to learn how green spaces around you may change over time and place. Be sure to stay on designated trails to avoid damaging sensitive areas.

**3. Walk and take note.**

- We recommend trying to identify five different native species during each walk. Don't forget mosses, fungi, and lichen during your search, as these can often be overlooked in the ecosystem but still play important roles just like trees and shrubs. Depending on the time of year, you will observe native species in different stages of their life cycle. When you have successfully identified a native organism, write it down. What are the identifying characteristics? Where does it prefer to grow? What other plants seem to grow alongside it?

**4. See an invasive? Report it!**

- During your walk, you may identify invasive species of plants. We have a handy resource detailing how best to dispose of these plants on our website at www.crd.bc.ca/invasive
- Some plants require special methods of disposal, so please follow the instructions on the website and report an invasive plant infestation to get assistance where needed.




# HAT's Gardening with Native Plants Guide & 3-in-1 Soil Meter

Native plants thrive naturally in our region and are vital components of healthy and resilient ecosystems and cultural practices. Once established, they rely on rainwater, requiring minimal watering, and provide many benefits such as food and habitat to support regional biodiversity, which is under threat from climate change and other pressures.

## *ACTIVITIES FOR HAT'S GARDENING WITH NATIVE PLANTS GUIDE AND SOIL METER:*

1. **Choosing the right plant for the right place.** While things like soil acidity and drainage can be improved, choosing plants whose needs fit the specific site conditions found in the garden will help them to thrive naturally.

- Select an area that you would like to use for growing plants, be that a spot in your front or backyard, or balcony. Use the Soil Meter to check sunlight levels, pH and moisture to help ensure that you understand your space prior to planting, giving your plants the best chance to thrive.
- Using the HAT Gardening with Native Plants guide provided, try to determine which plants would be suitable where on your property and get growing your backyard or balcony oasis!

## *HOW TO USE THE SOIL METER:*

Being careful to ensure that there are no rocks or stones present, gently insert the probe 2-4 inches (5-10cm) into the soil in your garden, raised bed, container etc.

***Note:*** *Do not force the probe into the soil as this could risk damaging the instrument.*

1. Wait for the reading to settle and observe the measurement. Repeat for light, pH and moisture.
2. Repeat this procedure in a number of locations for your sample. For best results, consider the average of the measured data. Note: You may notice that the dial doesn't move very much when testing the pH, as 6.5-7.5 is a neutral range.
3. Once finished taking samples, gently remove any remaining soil from the probe using your fingers and wipe clean. Place the device back in its protective packaging.

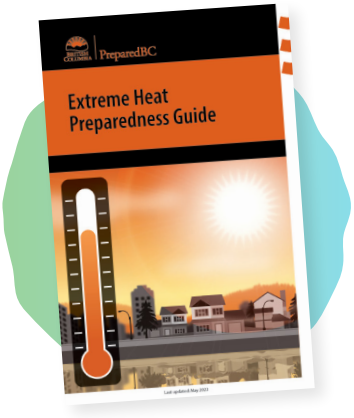
***Note****: Do not leave the tool in the soil for prolonged periods of time and do not submerge the unit in water, as this could damage the sensitive device. If the device is not functioning properly, please notify library staff.*

2. **It only takes an inch – Conserving water outdoors.** We are experiencing drier summers and more frequent droughts. To help reduce water consumption and increase the resilience of our planted landscapes, we recommend rethinking how you water your lawn and gardens. Follow the steps in this activity to start practicing water conservation at home:

- **Take stock of your current watering practices.** How frequently and for how long do you water your lawn? Your garden? Your containers? How do you water your green spaces? Do you use a hose? A sprinkler? Drip irrigation?
- **It only takes an inch (of water).** During the dry season, your lawn only needs an inch (2.5cm) of water per week to stay green. To measure this, you can place a tuna can or similarly sized container on the lawn to measure how long it takes your watering system to provide this amount of water to your lawn. You can also use the provided soil meter to check the moisture level of the soil before you water.
- **Assess the type of plants in your garden (and in your lawn).** Assess your plants' water needs. Consider replacing water-hungry plants with drought-tolerant, native species that need minimal watering once established. This also supports local wildlife. Check the HAT Gardening with Native Plants Guide for recommendations.
- **Going golden.** Letting your lawn go golden during the dry season can save a lot of water; it will recover when the rain returns.

## Additional Adaptation-Related Activities:

- Retrofit your home to improve your comfort year-round. Consider draft-proofing windows and doors, adding insulation and cooling: Visit www.homeenergynav.ca
- Register for a workshop or webinar on managing stormwater or emergency preparedness. Visit www.crd.bc.ca/events to find events and register for free.
- Attend a guided walk or interpretive program with CRD Parks naturalists.
- Join in with community efforts to remove invasive species and restore natural areas. Visit www.crd.bc.ca/parks for opportunities or contact your local municipality to learn how you can be part of these projects. Always ensure you have permission before doing any work on public land.
- Visit the CRD's YouTube channel CRDVictoria for short videos on managing your rainwater, outdoor water conservation and DIY irrigation system maintenance.
- For additional adaptation-related resources and activities, visit: www.crd.bc.ca/actionkits




# PreparedBC: Extreme Heat Preparedness Guide

As climate-related emergencies and extreme weather become more common in the region, it is a good idea to prepare. During the extreme heat event of 2021, the most vulnerable people in our community were those with pre-existing mental health considerations, the elderly, and those who lived alone.

In 2024, the CRD in collaboration with municipal partners, Island Health and the Province, launched the Capital Region Extreme Heat Information Portal to help residents and community planners explore and understand the capital region's vulnerability and exposure to extreme heat.

This activity invites you to learn about local risks and vulnerabilities to extreme heat in order to help better prepare for emergencies.

## *HOW TO USE THE EXTREME HEAT PREPAREDNESS GUIDE:*

Read the guidebook to learn how to prepare for extreme heat events in the capital region:

- **Get prepared before summer (pg 6)**
  - identify who is at risk
  - evaluate if you can stay at home
  - evaluate your home's cool zones
  - identify other locations to get cool
  - identify an extreme heat buddy
  - prepare your home
- **What to do during extreme heat (pg 13)**
  - Staying cool inside and outside
  - Check on your neighbours and heat buddy
  - What to do if you're getting too hot
  - Prepare for wildfires and smoke


*Check out the Capital Region Extreme Heat Information Portal to understand the capital region's vulnerability and exposure to extreme heat:* heat.prepareyourself.ca

# Staying Connected

Thank you for borrowing the CRD's Climate Action To-Go Kit, we hope that as you worked your way through the kit you noticed that there are many small, tangible steps that we can take that may seem insignificant on their own, but together add up to significant reductions in GHG emissions and help to prepare our communities for the changing climate.

### Don't let your climate action journey end here, help us spread the word!

Engage with your community and inspire others to take climate action. Start the conversation with friends, family, and neighbours and let them know that there are many things they can do to take action. Program offers are always changing, so please make sure to check out the CRD and municipal websites to see what you can access in your community.

Thank you for your commitment and dedication to making a positive change. Remember, your efforts matter, and together, we can create a healthier and more sustainable region for generations to come.

All of the resources listed in this guidebook, along with additional resources, can be found at www.crd.bc.ca/actionkits

*Invasive species removal volunteers*

Making a difference...together

## Special thanks to these program partners:

Greater Victoria Public Library

Vancouver Island Regional Library

Salt Spring Island Public Library

Southern Gulf Islands Community Libraries

Camosun College Library

## We want to hear from you!

Let us know what you thought about the Climate Action To-Go Kit, what you found useful, or less useful, or any suggestions for tools that you'd like to see included in future updates.

Contact us at climateaction@crd.bc.ca