# **Green** - Green Space and Habitat

### Now



### Why it Matters:

- · People, plants and wildlife all depend on healthy habitat.
- Green space makes our city more livable.
- · Healthy forests and wetlands clean our air and water.

### Now:

Burnaby is one of the greenest major cities in Canada. Green space is a big part of the city's identity.

### **Did you know?**

- Burnaby has over 150 parks.
- Parks and conservation areas cover 25% of the city, totaling 2,400 hectares (6,000 acres) - that's six times the size of Stanley Park!
- Deer Lake alone is home to over 150 species of birds and mammals including deer, coyotes, beavers, otters, and voles.

### A "Great" Place for Herons

+ Read more on page 59.

One of the region's largest Great Blue Heron colonies is located in Deer Lake Park and hosts around 40-60 nests and over 100 birds. Each spring, beginning in March, the herons can be seen gliding nearby as they forage to refurbish their nests and hunt to feed their chicks. Each mating pair raises one or two chicks, which leave the nest by July or August. The existing colony has been active since 2008, beginning with just a few nests. This habitat is all the more important as Great Blue Herons are a species at risk and they are exposed to a lot of urban stresses throughout the region. You can help by ensuring dogs do not chase herons, and supporting protection of habitat like wetlands and shorelines.

### **Future**



### Goal Healthy and resilient ecosystems.

### Control: High level of City control and influence.

City

### **Strategies:**

### NEW Big Move

#### 1.1 Review and consider new policies, plans and programs to protect, and enhance Burnaby's ecosystems.

- Suggested Actions: a) Explore opportunities to develop and implement an Ecosystem
- Health Strategy<sup>1</sup>, including baseline study, identifying strategic opportunities, and ongoing monitoring.

#### Quick Start #1

- Define scope/phasing and develop terms of reference for the Ecosystem Health Strategy, identify necessary resources and timeline.
- b) Investigate developing specific policies and plans to support healthy ecosystems.
- c) Consider programs and activities to protect, connect and enhance Burnaby's ecosystems.

#### 1.2 Protect and enhance habitat on public and private lands.

Suggested Actions: a) Consider opportunities to identify and

### legally protect additional key habitat areas (also see Green Strategy 1).

Others

- b) Support and advocate for effective regulations and policies to protect ecosystems at all senior levels of government - regional, provincial, and federal.
- c) Encourage and look for opportunities to include more native plants in landscaping on public and private lands.
- d) Encourage homeowners to use native plants by providing printed and online information, workshops, seminars and other resources.
- e) Consider developing a program and investigate funding sources to facilitate community-led habitat restoration.

#### **1.3 Connect existing high value habitat** with habitat corridors.

- Suggested Actions:
- a) Consider planting more native vegetation on public and private land, including areas next to existing and new cycling and walking trails, and along designated habitat corridors.
- b) Investigate developing a strategic habitat corridor plan and design standards (also see Green Strategy 1).

#### 1.4 Encourage development that respects and reduces the impact to our ecosystems.

### Suggested Actions:

- a) Consider developing 'dark sky' (light pollution reduction) policies and programs as a way to reduce unnecessary night-time lighting that can disturb wildlife, reduce night sky viewing and disturb neighbours.
- b) Explore developing policies and/or guidelines for bird-friendly building and window designs to help reduce collisions.
- c) Consider approaches to prioritize and require removal of private encroachments in streamside protection and enhancement areas.

### Quick Start #2

Undertake preliminary study (and mapping) to assess issue, recommend option(s) to protect streamside protection and enhancement areas.

### 1.5 Promote the value of ecosystems to human well-being.

Suggested Actions:

- a) Consider further promoting educational tours, wildlife watching and nature photography by building on those events offered during Environment Week.
- b) Explore ways to communicate the significant financial benefits that natural systems provide to people.
- c) Continue to recognize the value ecosystems contribute as infrastructure in City planning, management and decision making.

### 1.6 Reduce the environmental and economic impacts of invasive species.

Suggested Actions: a) Consider opportunities to expand current efforts to inform City staff and the public about the impacts of

<sup>1</sup>An Ecosystem Health Strategy is envisioned as a city-wide strategic plan to assess, protect and improve ecosystem health. It would build on and update the City's existing environmentally sensitive area (ESA) strategies. Potential components may include baseline assessment and mapping, and recommendations for policies and programs focusing on topics such as defining habitat corridors (locations and design), strategic stream/riparian enhancement, invasive species management, urban forest planning & management, consideration for species at risk, and ecosystem services valuation.



### pet stores and live-food markets. **1.7 Ensure Species and Ecosystems at Risk (SEAR) are considered in** planning, development and habitat enhancement, on public and private

lands. Suggested Actions:

Strategy 1).

lands.

- in Burnaby.

  - see Green Strategy 1).

invasive species, and how to prevent and control their spread.

b) Investigate developing an invasive species action plan to strategically eradicate, control and manage invasive species (also see Green

c) Consider creating new policies, regulations and incentives to help better prevent, remove and control invasive species on public and private

### Quick Start #3

#### Work with Metro Vancouver to support creating regional solutions for disposal of invasive plants and soil.

d) Encourage and develop approaches to stop the sale of invasive plants and animals, in places such as nurseries,

a) Investigate opportunities to monitor, map and develop management plans for species and ecosystems at risk

b) Explore opportunities to develop and apply best management practices for species and ecosystems at risk when planning, developing and conducting habitat enhancement.

c) Consider partnering with universities, other levels of government and community groups on research and enhancement programs for species and ecosystems at risk in Burnaby (also

### What Can You Do?



### **Improve Habitat**

- Plant a butterfly or bee garden.
- Prevent and remove invasive plants.
- Use native plants in your gardens.
- Install a birdhouse, mason bee 'condo' or bat box outside.
- Avoid using pesticides and herbicides.
- Use less outdoor lighting and make sure it shines downward.



#### **Get Involved**

- Explore local parks, streams and beaches.
- · Learn about local plants and animals.
- Support environmental non-profit organizations that promote action.
- · Join an environmental stewardship group like Streamkeepers.

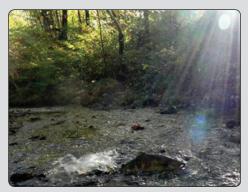


### **Encourage Others to Take Action**

- · Share information with friends, family or coworkers.
- Organize a 'nature' school field trip.
- Host a workshop at work or school.
- Write a nature article or blog.

# **Flow** - Water Management

### Now



### Why it Matters:

- Water is the basis for all life on earth.
  Rain water flows off buildings, land and roads into local streams, lakes, wetlands and the ocean.
- Reducing pollution on the land helps fish and other aquatic creatures.
- By using less water our communities can grow and prosper while avoiding the need for costly new water and sewer systems.

### Now:

Burnaby has rich aquatic ecosystems that include streams, wetlands, lakes and ocean coastline.

### Did you know?

- Burnaby has over 90 streams in three major watersheds - Burrard Inlet, Brunette Basin (Central Valley) and Fraser River.
- Burnaby has protected most open natural streams instead of piping them underground.

### Salmon in the City

Burnaby has over 90 unique streams and two lakes, part of three major watersheds (land basins draining to a common point) the Brunette River, the Fraser River, and the Burrard Inlet. Thanks to long-term efforts by the community working together, in the fall of 2013 salmon returned to spawn in some streams for the first time in living memory. In tiny Buckingham Creek at Deer Lake, more than a dozen chum salmon were seen spawning. Salmon are now able to swim from the Fraser River via the Brunette River and all the way up Still Creek as far as Rupert Street in Vancouver to spawn.

#### + Read more on page 59.

### Future



**Goal** Healthy and resilient watersheds.

### Control: High level of City control and influence.

City

### **Strategies:**



### 2.1 Manage rainwater to restore and mimic natural flows and quality.

Suggested Actions:

 a) Investigate ways to update and improve the City's existing rainwater management policies and regulations.

### Quick Start #4

Review existing regulations for opportunities to reduce barriers to on-site rainwater management such as residential rain-gardens.

- b) Encourage and promote on-site rainwater management by developing guides, education resources and exploring the role of incentives.
- c) Look for opportunities to reduce the volume and clean the water flowing off roofs, roads and paved areas directly into storm sewers by using systems like rain gardens and permeable pavement.
- d) Investigate ways to lead by example with City projects.

### e) Consider developing a program to encourage residential rain-gardens.

Others

#### 2.2 Protect, restore and improve aquatic ecosystems like ponds, lakes, streams, wetlands and marine areas.

Suggested Actions:

- a) Look for ways to build on the City's current policies, existing information and previous projects to assess, prioritize and consider opportunities to strategically restore Burnaby's streams (also see Green Strategy1).
- b) Consider opportunities to restore, enhance and daylight streams when public and private lands are being developed.

Quick Start #5

Create a high-profile demonstration project to showcase riparian/ aquatic ecosystem restoration, including community involvement and education.

## 2.3 Protect and improve water quality in aquatic ecosystems like ponds, lakes, streams, wetlands and marine areas.

### Suggested Actions:

- a) Explore ways to improve the effectiveness of the City's existing water quality protection policies, regulations and programs.
- b) Consider opportunities to further avoid or reduce the use of chemicals such as pesticides and fertilizers on public and private lands.
- c) Advocate for effective water quality policies and regulations at all senior levels of government – regional, provincial and federal.
- d) Investigate ways to reduce the amount of harmful substances entering creeks from storm drains by providing information about proper disposal.



### 2.4 Conserve water in the home, garden, workplace and community.

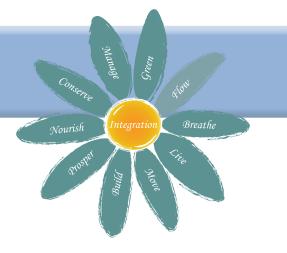
Suggested Actions:

- a) Explore ways to expand and enhance current water conservation and education programs.
- b) Encourage the installation of watersaving fixtures like faucets, toilets, showers and dishwashers in new buildings, and lead by example in City projects.
- c) Investigate water metering as a policy tool to encourage water conservation.



Start a water metering policy review and develop water conservation options for consideration.

 d) Allow water recycling and reuse for purposes such as irrigation and toilet flushing by considering policies, regulations, and the role of incentives.



### What Can You Do?



#### **Conserve and Recycle Water**

- Reduce sprinkling follow the City guidelines and bylaw.
- Only run the dishwasher and washing machine with full loads.
- Use water-saving plumbing fixtures.
- Collect water for the garden with a rain barrel.
- Replace lawn with drought tolerant plants.



### **Protect Water Quality**

- Choose eco-friendly soap, shampoo, and cleaning products.
- Dispose of paint and toxic chemicals at a recycling facility, not down the drain.
- Fix any fluid leaks from your car.



#### **Avoid Pollution**

- Use refillable water bottles.
- Don't litter put it in its place!
- Never dump anything down storm drains they all lead to creeks or the ocean!

# Breathe - Climate and Air Quality

### Now



### Why it Matters:

- Climate change is one of the most pressing global issues of our time and we can do many things locally to help.
- Reducing air pollution can improve air quality and also help to make us healthier.
- Making Burnaby less vulnerable to climate change impacts can also make Burnaby a nicer place to live.

### Now:

Burnaby is developing a Community **Energy and Emissions Plan to reduce** our greenhouse gas emissions, improve air quality, and make our buildings, transportation and energy systems cleaner and more efficient.

### **Did vou know?**

- About \$300 million per year is spent on energy by everyone in Burnaby.
- Burnaby has relatively low per-person greenhouse gas emissions compared with many other cities.
- Burnaby's emissions are produced 50% by transportation, 45% by buildings, and 5% by solid waste.

### Youth Taking Action

Youth are taking the lead and inspiring others of all ages to take action on climate change, from reducing emissions in schools, to organizing sustainability conferences and events, to making presentations to the United Nations. The Burnaby Youth Sustainability Network (BYSN), a student-led organization founded in 2010 by high school student Jennifer Hao is a great local example.

+ Read more on page 60.

### **Future**



### Goal

A community resilient to climate change, with clean air and low carbon emissions.

Others

### Control: Medium level of City control and influence.

City

### **Strategies:**



### 3.1 Reduce community greenhouse gas (GHG) emission rates, including in the areas of transportation, buildings, district energy and waste.

Suggested Actions:

a) Consider opportunities to reduce greenhouse gas emissions through community planning, transportation planning, development, and waste management including those identified in the Community Energy and Emissions Plan (currently in progress).

#### Quick Start #7

- Provide information to encourage energy efficiency, for example a website/phone number with information about opportunities for energy efficiency upgrades and grants for homes (new build and renovations).
- b) Look for ways to demonstrate leadership by reducing City (corporate) GHG emissions (also see Manage Strategy 3).

### 3.2 Improve resilience to climate change effects by assessing risks and seeking and acting on opportunities to protect the community and ecosystems from anticipated impacts.

NEW Big Move

Suggested Actions:

a) Consider developing a climate change adaptation strategy to improve the community's resilience.

Quick Start #8

Define an approach for developing a climate change adaptation plan, including information and resource needs, process and timeline.

b) Assess risks including sea level rise, extreme rainfall, storm events and flooding, shifts in plant and animal habitats and agricultural zones, changes in drinking water supply, changes in heat emergencies, and changes to the urban heat island effect.

c) Explore opportunities to reduce risks through land use, building design, using natural systems (for shoreline protection, rainwater management, cooling), landscape and urban forest planning, crop and pest management, water conservation, and emergency planning especially for vulnerable citizens (also see Green Strategies 1 and 2).

#### 3.3 Reduce emissions and health impacts of air pollutants (other than greenhouse gases).

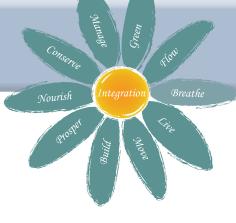
Suggested Actions:

- a) Work together with Metro Vancouver and neighbouring municipalities to implement the Integrated Air Quality and Greenhouse Gas Management Plan.
- b) Support regional, provincial, federal and Health Authority policies and programs to reduce indoor and outdoor air pollution.
- c) Support voluntary initiatives to reduce air pollution by industry, businesses, institutions and individuals.

#### 3.4 Reduce dependence on fossil fuels such as oil and gas.

Suggested Actions:

a) Encourage behaviour and investments supporting a "low carbon community"



### What Can You Do?



### Walk, Cycle and Take Transit

- Walk or bike for short trips.
- Take transit or bike to work or school one day per week (or more!).



### **Reduce Vehicle Emissions**

- Drive less by combining trips.
- Carpool to work and school.
- Avoid vehicle idling.
- · Maintain your vehicle.
- Choose a fuel-efficient, hybrid or electric vehicle.
- Live close to work and school.
- Fly less often.



### **Conserve Energy**

- Turn the heat down, wear a sweater at home in winter.
- Replace incandescent light bulbs with compact fluorescent or LED.
- Choose ENERGY STAR appliances.
- Have a home energy EnerGuide assessment done.
- Fix leaky windows and doors.
- Insulate your home.



### Now



### Why it Matters:

- Walkable neighbourhoods improve our quality of life and the health of the environment.
- Having places to learn, work, play and shop near our homes allows us to walk, cycle and use transit more and drive less.
- Incorporating nature within our urban neighbourhoods makes them healthier for people, plants and animals.

### Now:

Burnaby has many opportunities for convenient urban living, a wide range of housing choices, easy access to SkyTrain, bus routes, parks and community services.

### **Did you know?**

- Burnaby has been planning and building its four town centres - Brentwood, Lougheed, Edmonds, and Metrotown - for over 30 years.
- In the past 20 years Burnaby's population has grown by 66,000 people.
- Another 89,000 people are expected to live in Burnaby 20 years from now.

### UniverCity

UniverCity, Burnaby's award-winning sustainable mixed-use community beside Simon Fraser University atop Burnaby Mountain, is home to more than 4,000 people. A variety of people, including young families and working professionals, are choosing to live here for its proximity to nature, walka and safe streets, local services, and good transit connections to other locations.

+ Read more on page 61.

### **Future**



### Goal

A network of compact and complete communities, within a fabric of healthy ecosystems.

### Control: High level of City control and influence.

_	City	_

### **Strategies:**



#### 4.1 Create a more diverse, vibrant, resilient and resource efficient city from the neighbourhood level up.

Suggested Actions: a) Encourage the creation of high quality,

- enjoyable, walkable neighbourhoods. b) Investigate further protecting
- agricultural land and key habitat areas served by transit. (also see Green Strategy 1). c) Consider ways to better manage risk
- from natural hazards like flooding using policies and programs. d) Further Integrated Stormwater
- Management Plans (ISMP's) by exploring opportunities to integrate the goals of these plans into land use planning and management to create a more integrated and ecologically healthy neighbourhoods.
- e) Review opportunities within existing neighbourhoods, Town Centres and Urban Villages to create more diverse, vibrant and vibrant walkable communities when updating the city-

wide Official Community Plan and

other community plans.

### f) Look for ways to reflect Community Energy and Emissions Plan (CEEP) strategies in updated community plans (also see Breathe Strategy 1).

g) Consider 'green neighbourhood' policies<sup>2</sup> to encourage neighbourhood scale sustainability and resource sharing (also see Strategy Build Strategy 5).

### 4.2 Strengthen the network of complete, compact, and walkable neighbourhoods

Suggested Actions:

- a) Continue to concentrate new development in Town Centres and Urban Villages well served by transit service to avoid "sprawl".
- b) Explore creating cultural places within walking distance for people to shop, gather, socialize and enjoy culture without needing to drive. This could include small shops, theatres, art galleries, libraries, pubs, cafes and other cultural places.

**Big Move IN PROGRESS** 

4.3 Create accessible outstanding outdoor public spaces that encourage active transportation, socializing and interacting with nature.

Suggested Actions:

- a) Investigate projects and funding sources to further enhance public spaces and provide for more natural areas and features in urban areas of the City.
- b) Encourage more community events such as block parties, farmers' markets, festivals.



Review current opportunities to convert more streets for pedestrian use, including temporary car-free events (such as Hats-Off-Day) and opportunities for permanent conversions.

- c) Seek to provide more public amenities in outdoor spaces, including benches, water fountains, and public washrooms.
- d) Investigate opportunities to make streets and other public places more vibrant and ecologically healthy - places to meet neighbours, shop, enjoy nature.

#### 4.4 Integrate green space, nature and features into urban areas, including **Town Centres and Urban Villages.**

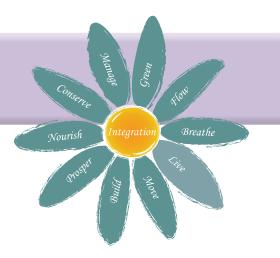
Suggested Actions:

- a) Consider strategically protecting and restoring habitat (also see Green Strategy 2).
- b) Review opportunities to create more pedestrian trails that connect neighbourhoods and provide wildlife habitat (also see Green Strategy 3).
- c) Explore opportunities to incorporate more natural features like trees, native plant landscaping, and rain-gardens along roads, urban trails and other public spaces.

<sup>2</sup> Encouraging neighbors, community institutions and businesses to join with city leaders and utility providers to establish progressive sustainability goals and co-develop innovative district-scale projects. For example www.ecodistricts.org and Districts 2030.



Others



### What Can You Do?



### Walkable, Friendly Neighbourhoods

- Walk or bike for short trips.
- Shop locally.
- Drive less and use transit more.
- Organize a neighbourhood meal or event to get to know your neighbours.



### **Green Neighbourhoods**

- Plant native shrubs and trees for gardening and beautification.
- Organize a local park clean-up.
- Plant a food garden on your strata property or at your school.



### **Get Involved**

- Learn about proposed development in your neighbourhood.
- · Support features in new development like sidewalks and landscaping that improve walkability.
- Encourage environmentally friendly city planning.

# **Move** - Transportation

### Now



### Why it Matters:

- Walking, cycling and using transit improves our health, improves air quality and reduces carbon emissions.
- Walking, cycling and transit can improve mobility for all ages and abilities.
- Combining a mix of land uses, walkable neighbourhoods, and good transit service makes it easier to get around.

### Now:

People in Burnaby have many transportation choices.

### **Did you know?**

- Burnaby has 11 SkyTrain stations on two lines, and 34 bus routes.
- 23% of Burnaby's daily trips are by transit, higher than the regional average of 14%.
- 62% of Burnaby workers live within 10 kilometers of their jobs and 35% commute to work by transit.
- Burnaby has 145 kilometers of designated bike routes and trails.

### Living Streets

Streets in Burnaby's four Town Centres are taking on a whole new look and feel, with wide sidewalks, public art, lush rain gardens and street trees, comfortable seating areas and separated bike paths. This is the result of Council's adoption of the new Town Centre Street Standards, and these features are intended to create delightful environments that encourage people to walk, cycle, and transit to their daily activities.

#### + Read more on page 62.

### Future



### Goal A walkable, bikeable, and transit-supported city that supports a healthy community and environment.

**Others** 

5.2 Make walking and cycling easier,

a) Investigate opportunities to expand

routes and infrastructure (routes,

separated paths, bike facilities),

Quick Start #10

Review options for funding

neighbourhoods.

tools like apps.

5.3 Improve public transit.

and improve pedestrian and cycling

especially north-south connections.

new sidewalks for existing residential

b) Investigate ways to make it easier to

find your way around by bike, using

better signs, maps and navigation

safer and more comfortable.

Suggested Actions:

### Control: Medium level of City control and influence.

City

### **Strategies:**



#### 5.1 Develop and implement green transportation policies that create vibrant streets, reduce pollution and support healthier, more active lifestyles.

Suggested Actions:

- a) Look for ways to include a strong focus on walking, cycling and transit, and safe streets for all people, as priorities in transportation policies.
- b) Implement the City's recently adopted Public Realm Standards for Town Centre Streets.
- c) Consider expanding complete streets policies (mobility for all users, street trees/habitat, rain-gardens, and social spaces).

#### Suggested Actions: a) Advocate for better levels of affordable transit service including more frequent bus service on select routes in Burnaby, especially north-south connections.

b) Consider accelerating improvements to bus stops, for example providing more amenities like shelters and making them wheelchair accessible.

#### Quick Start #11 $\checkmark$

#### Review potential priority locations for digital 'next bus arrival time' signs for certain busy bus routes.

#### 5.4 Provide programs to encourage and reward a shift towards walking, cycling, and transit.

Suggested Actions:

- a) Promote programs such as Bike to Work and Bike to School Week.
- b) Continue working with developers to create policies and incentives to encourage transit use by residents of new development.
- c) Foster a culture of "car free living" through marketing and branding.
- d) Promote cycling, to the public and city staff, as a normal everyday activity for all ages by encouraging "cycle-chic", upright bikes, cargobikes, kids participation, and other programs, through marketing and partnerships with others.
- e) Investigate ways to work with health authorities and schools to promote benefits of walking/cycling.

### Quick Start #12

Encourage active lifestyles by developing and promoting Parks, **Recreation and Cultural Services** programs to encourage walking and cycling for fitness and transportation.

#### 5.5 Reduce impacts of vehicles on environmental health, personal safety and livable neighbourhoods.

Suggested Actions:

a) Explore ways to design more local residential roads to slow vehicle speeds and discourage motorized vehicles from short-cutting through neighbourhoods.

safely share the space.

### 5.6 Transition to more efficient (including zero-emission) vehicles and more efficient use of vehicles.

- Suggested Actions:

### 5.7 Reduce the environmental impacts of transporting goods.

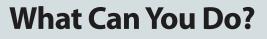
Sugaested Actions: a) Advocate and consider developing policies to encourage effective environmental risk management for transporting dangerous goods through the community in bulk by rail, truck, pipeline, and shipping.

= Big Moves IN PROGRESS A = Big NEW Moves A = FUTURE Big Moves= Quick Starts

b) Encourage more "Woonerf" or living streets which double as a park or plaza with attractive features to restrict vehicle speeds so that all users can

a) Investigate providing more publicly accessible electric vehicle charging stations and car share vehicles in new and existing developments.

b) Consider developing a parking policy to encourage fewer automobile trips and prioritize more efficient and low-emissions vehicles like priority parking for carpool/vanpool, electric vehicles, and car share vehicles.





### Walk

- Walk to close-by places (up to 2 km).
- · Shop and eat at walkable destinations.
- Get children used to walking early on.



### Cycle

- Cycle to medium distance places (2-5 km).
- Cycle to work or school one day per week (or more!).
- Go on a cycling "date".
- Teach children safe cycling skills.



### Transit

- Take transit to medium to long distance places (5-20+ km).
- Choose to live in a place well served by transit.
- Support improvements to transit.

### **Towards Car-free**

- Join a car co-operative.
- Buy a cargo bike.
- Consider going car-free!
- · Choose to live close to amenities, work or school.

# **Build** - Green Buildings and Energy

### Now



### Why it Matters:

- Green buildings use less energy and water and cost less to operate.
- Green buildings support healthy ecosystems.
- Buildings can last a long time, so it's important to make smart choices.
- Green building knowledge and technologies are an important part of the green economy.

### Now:

Burnaby already has many green residential, office, school and city buildings.

### **Did you know?**

- UniverCity, Burnaby's award-winning sustainable community, is home to over 4,000 people. It has green buildings (energy efficient and water efficient), and a district energy system.
- UniverCity Childcare Centre is a "regenerative" building that produces all its own energy, treats its own waste water and uses only the safest materials.
- New City facilities like the Edmonds Aquatic and Community Centre and the Tommy Douglas Library have green features that help to reduce operating costs and protect the environment.

### Living in Harmony with Nature

Harmony House is a "net-zero energy" house in south Burnaby designed to produce more energy then it uses - including charging the family's electiric car!

#### + Read more on page 63.

### **Future**



### Goal

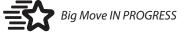
**Buildings and infrastructure** that have a positive impact on the environment.

Others

Control: Medium level of City control and influence.

City

### **Strategies:**



#### 6.1 Meet updated energy performance building code requirements for new buildings.

Suggested Actions:

a) Promote and encourage energy conservation for new buildings. b) Explore working with designers,

builders, energy professionals, industry and the province to identify opportunities to optimize building code compliance.



Review issues and possible opportunities to improve compliance, such as with requirements for review of development proposals by an energy professional.

c) Consider other CEEP recommended strategies for improving energy performance (e.g., energy audits/ labeling; and biannual policy reviews).

### 6.2 Improve building design and construction to meet higher standards of environmental performance.

Suggested Actions:

a) Promote and celebrate buildings that demonstrate leadership in conserving energy and water, reducing emissions and waste, and enhancing ecosystems.

Quick Start #14

*Review upcoming civic building projects* for opportunities to demonstrate energy-efficient passive design and netzero energy.

- b) Consider developing programs to further encourage and reward builders of highly energy efficient homes.
- c) Explore developing 'green building' policies and programs for new developments, exceeding minimum regulatory requirements, including energy and emissions reduction, water conservation, waste reduction and ecosystem enhancement.

6.3 Make existing buildings more 'green' - so they use less energy, less water, produce less GHG emissions, use healthy (non-toxic) and recycled materials, and reduce construction waste.

- Suggested Actions:
- a) Investigate opportunities to develop policies and programs to increase awareness, financing and incentives for retrofitting existing buildings to improve their environmental performance.

#### 6.4 Reduce building demolition and construction waste.

Suggested Actions:

- a) Support the development of more building materials recycling centres: places where contractors and homeowners can buy and donate salvaged materials for building and renovation projects.
- b) Investigate policy approaches to encourage more adaptation of existing buildings for new uses, and/or re-using and recycling the materials at the end of their useful life.

#### 6.5 Share and/or re-use energy and water between buildings where possible.

Suggested Actions:

- a) Investigate policy approaches to encourage district energy systems within large site developments.
- b) Encourage recovering and reusing waste heat from sources such as buildings, industrial plants, and sewers.
- c) Explore opportunities for water re-use and recycling within large site developments.
- d) Consider developing 'green neighbourhood' policies, and facilitate business leadership, to improve sustainability and encourage resource sharing within neighbourhoods (also see Live Strategy 1).





### = Big Moves IN PROGRESS A = Big NEW Moves A = FUTURE Big Moves $\square$ = Quick Starts

### 6.6 Encourage a shift to renewable energy for buildings where possible.

Suggested Actions:

- a) Encourage the use of renewable energy on large site developments as a component of a green energy opportunities review.
- b) Consider developing policies to encourage the use of solar hot water systems in new buildings (also see Breathe Strategy 1).



### What Can You Do?



### **Conserve Energy at Home**

- Replace incandescent light bulbs with compact fluorescent or LED.
- Choose ENERGY STAR appliances.
- Have a home energy EnerGuide assessment done.
- Fix leaky windows and doors in your home.



### **Home Renovations**

- · Choose low-impact, sustainably sourced or recycled materials.
- Use Energy Star windows/doors.
- Add extra insulation.
- Choose products low in volatile chemicals (paints, furniture, carpets, window coverings).
- Install energy efficient appliances.



#### **New Green Buildings**

- Support green buildings.
- · Consider energy efficiency when choosing a new home.
- Design your new home for energy efficiency.
- Recycle demolition and building materials from construction.

# **Prosper** - Green and Inclusive Economy

### Now



### Why it Matters:

- The green economy is a fast-growing sector in both BC and the world.
- Improving sustainability can also improve a business's bottom line.
- Green businesses can attract people to live, work and invest in Burnaby.
- Businesses can help to encourage others to make green choices too.

### Now:

Burnaby has a large number of jobs and a wide variety of industries including high technology and environmentally focused companies.

### Did you know?

- Burnaby has maintained about 11% of the region's employment since 1971.
- Burnaby gained over 19,000 jobs in the 10 years from 2001 to reach almost 139,000 jobs in 2011.

### Businesses 'Pledge' for Sustainability

The Burnaby Board of Trade's Pledge for A Sustainable Community is an online resource for helping businesses large and small make smart environmental choices, save money and promote their companies. Companies that take the Pledge can access tips and case studies, share their successes, serve as role models, and take on new environmental challenges. The Pledge is becoming a significant part of the BBOT brand and has generated a lot of interest from other organizations throughout North America. For more info please visit <u>www.bbotpledge.ca</u>.

### + Read more on page 63.

### Future





A prosperous economy that supports a healthy environment.

Control: Low level of City control and influence.

City

### **Strategies:**



7.1 Work with the Burnaby Board of Trade, post-secondary institutions and other organizations to expand Burnaby's green economic sector and improve environmental performance of businesses.

Suggested Actions:

- a) Encourage more green businesses to locate in Burnaby.b) Consider creating partnerships between businesses and educational
- institutions to develop plans and programs to reduce waste, use less energy/water and reduce GHG emissions.
- c) Investigate the role incentives could have in encouraging innovative green business practices.
- d) Encourage research and development of green technologies.
- e) Support green social enterprises by promoting and partnering with non-profit groups with an environmental focus.

f) Consider updating existing
 City policies including the Economic
 Development Stategy.

#### 7.2 Work with the Burnaby Board of Trade, post-secondary institutions, and other organizations to promote green businesses and celebrate their successes.

Suggested Actions:

- a) Support and promote more businesses to take the Burnaby Board of Trade's (BBOT) Pledge for a Sustainable Community, Climate Smart program, and other similar programs.
- b) Encourage businesses with outstanding green programs to apply to the City's existing annual Environmental Awards program.
- c) Support the development and use of green business standards that help people make environmentally wise choices.

7.3 Work with the Burnaby Board of Trade, post-secondary institutions, and other organizations to strengthen the business sector that facilitates recycling and reuse.

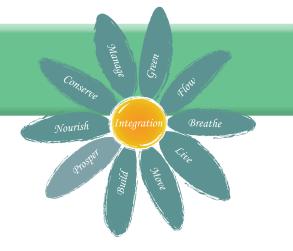
Suggested Actions:

a) Promote businesses that are leading in reducing their environmental footprint.



Work with BBOT to create an online directory of local 'green' products and services.

- b) Explore working with businesses and industries beyond the city's borders to further reduce waste affecting Burnaby, and make use of wastes commonly produced in Burnaby.
- c) Investigate ways to encourage more businesses to locate in Burnaby that recycle, reuse or harvest waste for energy.



### What Can You Do?



### **Support Local Green Businesses**

- Buy eco-friendly products.
- Shop at locally owned businesses instead of 'big box' stores.
- Support businesses that take action for the environment.
- Shop at thrift stores and other stores that offer re-used items.



#### **Get Engaged**

- Give businesses feedback about their environmental performance.
- Promote sustainability in your workplace.
- Encourage your company to take the Burnaby Board of Trade's Pledge for Sustainability.
- Volunteer with a local environmental nonprofit community group.



#### Reduce, Reuse, Recycle

- *Reduce*: Share things like tools with neighbours.
- *Reuse*: Buy used items instead of new or resell items you no longer need.
- *Recycle*: Choose to buy products made from recycled materials.

# **Nourish** - Food Systems

### Now



### Why it Matters:

- Food connects us in a personal and direct way with our environment.
- Healthy food is necessary for personal health and wellness.
- Eating locally helps to strengthen the local economy and reduce air pollution caused by transporting food long distances.

### Now:

Burnaby has been growing food for over 150 years.

### Did you know?

- Burnaby has about 43 farms growing food on 129 hectares (318 acres) in south Burnaby.
- Burnaby's farms are very productive they earned an average of 80% more than the provincial average or \$269,000 per farm.
- Vegetables and cranberries are the main crops grown in Burnaby.
- Burnaby has a number of community gardens the largest has 373 plots and is in the Riverside neighbourhood in south Burnaby.
- Beekeeping is allowed in most residential areas in Burnaby.

### Gardens "Grow" Communities

Burnaby Food First helps to connect residents with extra garden space with others looking for a place to grow food. Sonya and Luci are two people who benefited from this service.

+ Read more on page 64.

### Future



### Goal

A food system that supports healthy people, a healthy community and a healthy environment.

### **Control:** Low level of City control and influence.

City

### Strategies:



#### 8.1 Improve food system sustainability and security to support local food production, distribution and consumption.

Suggested Actions:

- a) Investigate ways to better protect Agricultural Land Reserve and City zoned agricultural lands using zoning, land use planning and other tools (also see Live Strategy 1).
- b) Look for ways to further reduce regulatory barriers for small-scale farms and food producers.
- c) Consider developing a food system strategy to improve sustainability of food production, distribution and use, by the City and the community.

### Quick Start #16

Define the scope and develop a terms of reference for the food system strategy, identify budget/funding sources and timeline.

#### d) Review and update policies and regulations to support local food production, distribution and consumption.

Others

e) Support and promote Farmers' Markets in the City, particularly in convenient walkable locations within Town Centres.

#### 8.2 Develop a culture that celebrates and supports local, organic and healthy food.

- Suggested Actions:
- a) Encourage celebrations such as an annual local food and wine festival.
- b) Investigate opportunities to promote and market farms and tours in the Big Bend area.
- c) Encourage businesses such as restaurants and their food suppliers to purchase local, organic, sustainable food, for example by celebrating those that do and providing information for licensees to make responsible choices.

### d) Promote local farms and vendors of locally produced food.



Provide information on City website to promote local farms and vendors of locally produced food.

### 8.3 Encourage citizens to grow and process food within the City.

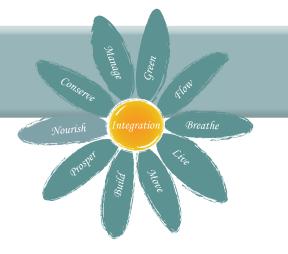
Suggested Actions:

- a) Consider partnering with others and/or consider hosting City workshops for citizens to learn about growing and processing food at home.
- b) Support citizen-led initiatives to create new community gardens on suitable sites in the City.



Partner with a non-profit community group to establish a publicly accessible community garden and/or 'food forest' (food bearing trees and shrubs).

- c) Support and encourage school programs with a focus on topics such as food gardens, nutrition, composting, and others.
- d) Support efforts of community groups focused on food system.
- e) Support efforts to provide useful information to the public about local, organic and healthy food.



### What Can You Do?



### **Buy Local Food**

- Buy organic, locally grown, in season food.
- Shop at the Farmers' Market or use a farm-direct food service!



### **Grow Your Own Food**

- Start a veggie garden or planter box.
- Join a community garden.
- Share your backyard with someone experienced in growing food.
- Start a school food garden.



### **Communicate and Network**

- Share extra fruit or veggies with neighbours.
- Encourage local food purchasing in your workplace, school or organization.
- Teach children, friends and family about growing food.
- Join a food-focused community group like Burnaby Food First.

## **Conserve** - Waste Management

### Now



#### Why it Matters:

- In nature, there is no such thing as "waste" – everything is recycled.
- Disposing of waste is very expensive and releases greenhouse gases.
- Creating new products from recycled materials can create local "green" jobs.
- Using waste as a resource can be good for our local economy while reducing the need for new resources.

#### Now:

Burnaby has a successful food-scraps collection and recycling program serving houses, townhouses and apartments.

#### **Did you know?**

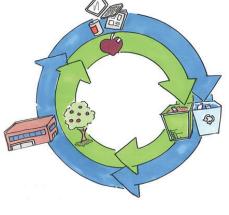
- Burnaby diverts almost half of its waste by recycling and composting.
- Burnaby's new Eco-Centre accepts a variety of materials for recycling including appliances, hard and soft plastics, metal, paints and household chemicals, and Styrofoam.
- The Waste-to-Energy facility, located in Burnaby since 1998, processes 25% of the region's garbage and produces enough electricity to power 15,000 homes.

### High Rise Recycling Champions

How did seemingly "ordinary" citizens – residents and strata members of an older high-rise apartment building in Burnaby become recycling super-heroes who are now sought out to teach others the secrets of their success?

#### + Read more on page 65.

### Future



### **Goal** World-leading waste reduction, diversion and management.

### Control: Medium level of City control and influence.

City

### Strategies:

### 9.1 Reduce material consumption by citizens and businesses.

- Suggested Actions:
- a) Encourage residents and businesses to buy less "stuff", through marketing and social media campaigns, like the Metro Vancouver "Create Memories Not Garbage" campaign.

## 9.2 Strengthen the sharing economy to use existing materials and resources more efficiently.

Suggested Actions:

- a) Consider developing policies to encourage sharing and collaboration, for example, space (such as gardens or workspace), vehicles, bikes, food, books, tools, repair cafes, clothing and others.
- b) Support on-line resources where businesses can exchange or share materials with other organizations.

## 9.3 Expand waste reduction, recycling and food scraps programs.

Others

**Big Move IN PROGRESS** 

Suggested Actions: a) Promote recycling.

- b) Investigate ways to expand the City's food scraps collection programs.
- c) Look for opportunities to use more recycled materials in all construction and landscaping projects.
- d) Explore new markets for recyclables.
- e) Investigate providing more locations at a neighbourhood scale for residents and businesses to drop off recycling and organic waste



Conduct a policy and program scan of practices elsewhere and opportunities for Burnaby for localized neighbourhood drop-off.

f) Promote responsible purchasing and sharing to reduce waste.

### 9.4. Reduce and eliminate the sale and use of hard-to-recycle materials.

Suggested Actions:

- a) Advocate for and promote Extended Producer Responsibility Programs for reducing packaging waste and hard to recycle materials and appliances.
- b) Consider advocating for bans of certain harmful products like Styrofoam, plastic bags, and plastic bottles.

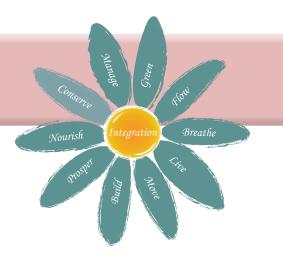


Consider options for eliminating bottled water sales at City facilities and encourage drinking tap water instead, such as by providing filling stations and at-cost reusable bottles.

## **9.5 Explore new opportunities for using** waste as a resource (both materials and energy).

Suggested Actions:

- a) Investigate feasibility of processing green waste locally (within Burnaby) to provide compost and/or energy.
- b) Investigate opportunities for re-using waste heat such as from the regional Waste-to-Energy facility.



### What Can You Do?



#### Reduce

- Buy less and only what you need.
- Give "experiences" as gifts instead of things.
- Buy higher quality products that last longer.
- Use refillable water bottles and coffee cups.
- Challenge yourself and your family to produce as little garbage as possible!



#### **Re-use**

- Make art or crafts from used items.
- Re-sell or donate items.
- Buy used products at thrift stores, garage sales, and online.
- Use salvaged materials and appliances for renovations.



#### Recycle

- Sort recycling and garbage properly.
- Recycle everywhere, including at home, school, work, restaurants and public events.
- Return batteries, oil, metal, paint, plastic, Styrofoam, glass, paper to the Eco-Centre.
- Return bottles and electronics to the Return-It Depot.

# **Manage** - Governance, Education and Partnerships

### Now



### Why it Matters:

- Cities are leading the way in many areas of sustainability around the world.
- Burnaby relies strongly on its partnerships with others in the community.
- Education provides a foundation of knowledge and understanding for tomorrow's leaders.

### Now:

Burnaby was recognized as the "Best Run City in Canada" in 2009 by Maclean's Magazine.

### **Did you know?**

- Burnaby was the first city to celebrate World Rivers Day in 1993.
- Streamkeepers help to protect and restore many waterways across the city.
- Every year Burnaby hosts Environment Week activities and presents Environment Awards to leaders in the community.
- Burnaby provides public education on many environmental topics, including food scraps recycling, water conservation, and invasive species control.

### **Networks of Blue and Green**

Initiated in 1972, Burnaby's Open Watercourse Policy has had far-reaching effects directly influencing the ecology and form of the city as we know it now. Today there are over 90 open streams in the city, supported by many City programs for stream protection.

+ Read more on page 66.

### **Future**



### Goal

Environmentally aware and engaged community working together to improve Burnaby's environmental performance.

### Control: High level of City control and influence.

Citv

### **Strategies:**

### 10.1 Educate citizens about ecology and sustainability.

- Suggested Actions:
- a) Consider working with schools and universities to engage youth in stewardship

### and incorporate local ecology and sustainability into curricula.

### Expand and improve:

- sustainability contests, challenges and scholarships:
- school 'green teams' and Burnaby Youth Sustainability Network; and - Burnaby Youth Week classes such as
- gardening, composting, cooking and bike repair.

### Consider:

- eco-education as a core component of school curriculum;
- youth stewardship programs like "stream teams";
- City staff to visit schools to teach about environmental issues and actions.
- b) Investigate ways to develop and promote education programs to encourage eco-friendly practices at home and in
- the community. For example: - virtual tours of eco-friendly home renovation projects;
- recycling, re-use and sharing 'festival'



competitions, education campaigns, and share information and resources.

Others



#### **10.2 Explore innovative ways to engage** the public on environmental issues.

### Suggested Actions:

a) Consider developing city communication approaches to engage diverse audiences (all ages, genders, ethnic backgrounds), including using current media and technology tools.

Quick Start #21 

Develop recommendations to provide more opportunities for dialogue about sustainability at public festivals and events.

- b) Explore ways to make it easier for people to engage, share ideas and understand how decisions are being made, for example:
- communicating the ESS with simple graphics and plain language;
- using social media and digital

technology to engage the public; and

#### - communicating about sustainability initiatives in multiple languages.

### NEW Big Move

10.3 Demonstrate leadership in sustainability through City facility and operations management by reducing energy and GHG emissions, conserving water, reducing and diverting waste and enhancing ecosystems.

- Suggested Actions:
- a) Pursue developing priorities and strategies for improving a corporate sustainability.
- b) Explore ways to implement further improvements in operational areas such as City procurement, vehicle fleet, staff commuting, food services, new and existing buildings, landscape design and management, server virtualization, and management of festivals and events.

### Quick Start #22 $\checkmark$

#### Look for opportunities to distribute left over food to people in need, such as by partnering with existing organizations that do this.

c) Consider financial, social, and environmental impacts over their entire lifetime when deciding how to manage hard assets like buildings and infrastructure.



### **10.4 Improve sustainability** management through enhanced **City business practices, system** development, and leadership.

#### Suggested Actions:

- a) Consider different options to resource and support the implementation of the ESS.
- b) Seek to improve communication and coordination of sustainability initiatives among City departments.



#### Provide an annual report via the Environment Committee of Council on progress and implementation of the ESS.

in Burnaby.

= Big Moves IN PROGRESS A = Big NEW Moves A = FUTURE Big Moves V = Quick Starts

## partnerships.

Suggested Actions: a) Explore ways to develop and nurture industry and businesses.

Suggested Actions:

- representation.
- community groups.

c) Seek to improve integration of sustainability into management and decision making.

d) Consider developing an approach for monitoring and reporting on progress toward the ESS vision and goals.

#### **10.5 Develop programs to encourage** and reward people who develop and try new or creative environmental practices.

a) Encourage people to be environmental leaders by: promoting City awards programs; helping to promote existing rewards programs offered by BC Hydro, Fortis and others; promoting contests and challenges; and profiling 'citizen champions'.

b) Consider developing a program to foster neighbourhood green projects involving community education, engagement, and skills development.

### **10.6 Develop and nurture community**

partnerships with neighbouring municipalities, other levels of government (regional, provincial, federal, First Nations), community groups,

b) Consider hosting regularly scheduled meetings of Burnaby inter-departmental staff and stewardship groups to exchange information on sustainability related projects and initiatives.

c) Investigate convening interagency cooperation task forces to achieve goals across all levels of government, with business and public

d) Consider partnering with community groups and schools to assess and monitor local ecology and restore ecosystems. For example: - Review and where possible enhance city-supported coordination of environmental

Quick Start #24

#### Undertake an opportunity analysis for enhanced support and coordination of streamkeeper groups by the City.

- Support university-led ecology research





#### **Educate**

- · Learn about ecology and sustainability issues that interest you.
- Support environmental education in schools.
- Enroll children in nature programs.



### **Get Engaged**

- Participate in events like Earth Hour, Bike to Work Week, Car-Free festivals.
- Vote!
- Give feedback to the City write letters, attend open house events, or attend Council meetings.
- Volunteer with an environmental community organization.
- Organize a neighbourhood clean-up.



### **Communicate and Network**

- Share your knowledge with others at work, school and at home.
- Write an article or blog.
- Host a neighbourhood party or event with a sustainability theme.