

# CITY OF ABBOTSFORD SUSTAINABILITY REPORT

May 2018





CITY OF ABBOTSFORD  
**2017 SUSTAINABILITY REPORT**

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## 1.0 INTRODUCTION

The City of Abbotsford is the sixth largest municipality in British Columbia, and the largest municipality by land mass. Abbotsford is a rapidly growing community with a diverse and vibrant population of over 140,000, based on the 2016 Official Community Plan (OCP). Council's strategic plan envisions Abbotsford as the Hub of the Fraser, with a mission to continually improve the quality of life within the community by delivering key services for current and future generations. The vision is supported by four cornerstones: Vibrant Economy, Complete Community, Fiscal Discipline and Organizational Alignment.

The City provides community services and infrastructure in support of a sustainable, livable City. The City's environmental commitment is established through the integration of sustainability throughout the OCP, and is further reflected in Council's Corporate Strategic Plan, Corporate Energy Policy and Climate Action Reserve Fund Management Policy. Sustainability provides significant benefits for Abbotsford residents, including environmental stewardship, cost reduction, and environmental self-sufficiency.

Climate action is a provincial priority and local governments are key partners in helping to reduce greenhouse gas (GHG) emissions and create complete, compact, energy efficient communities. The 2017 Sustainability Report highlights the City's environmental commitment by presenting sustainability actions that the City has taken to support the reduction of energy consumption and GHG emissions. The actions are presented in six categories: Planning, Buildings and Lighting, Parks and Open Spaces, Solid Waste, Transportation and Water/Wastewater. The report summarizes the key sustainability action items that the City has undertaken in 2017 to support GHG and energy reduction.

## 2.0 2017 SUSTAINABILITY HIGHLIGHTS

### PLANNING

Planning sets the stage for GHG emissions reductions, including city-wide plans such as the OCP, Master Plans and Neighbourhood Plans. Sustainable planning on a corporate level enables the City's to meet its key strategic goal of being a complete community that "values our connection with the environment."

#### 2017 Highlights

- Undertook Plan 200K, a major initiative to update 9 Master Plans, 4 Neighbourhood Plans and 7 key plans/studies to align with the OCP
- Commenced several key Neighbourhood Plans including City Center, Historic Downtown and the UDistrict
- Began development of a green fleet strategy to reduce GHG emissions associated with the City's vehicle and equipment use



### BUILDINGS AND LIGHTING

The City of Abbotsford manages 188 municipal buildings which occupy 1,300,000 square feet. A key objective is to use the minimum amount of energy needed to provide comfort and safety and tap into renewable energy sources for heating, cooling and power.

#### 2017 Highlights

- Began work on corporate energy reduction projects, reducing energy consumption by over 320,000 kWh annually
- Encouraged development within the Urban Development Boundary in alignment with the OCP, with increased densification along the Primary Transit Corridor
- Partnered with BC Hydro through the Energy Manager Program to reduce electricity in civic facilities and utilities



## PARKS AND OPEN SPACES

Parks and open spaces refers to parks, greenways, boulevards, community forests, urban agriculture, and other naturally occurring areas. These spaces are among Abbotsford's defining features and support the environmental, physical, social and visual aspects of the City. Parks and open spaces play a key role in meeting the City's Complete Community priority identified in the corporate strategic plan.

### 2017 Highlights

- Created two new parks in the Auguston area, and restored various park areas with volunteers and community stakeholders
- Partnered with the FVRD in their Invasive Weed Control Program targeting Wild Chervil, Tansy Ragwort, Giant Hogweed and Knotweed
- Maintained 192 parks in the community covering 842 hectares supporting sport, play and recreation for a complete community with an enhanced quality of life



## SOLID WASTE

Sustainable solid waste management and service delivery are a key priority for a sustainable community. Reducing, reusing, recycling, recovering and managing the disposal of the residual solid waste minimizes environmental impacts and supports GHG reductions, and improved air and water quality.

### 2017 Highlights

- Began consultation on the proposed compostables collection requirements for the multi-family and industrial, commercial and institutional (ICI) sectors
- Participated in the provincial Recycle BC recycling program, including an expanded list of materials to be accepted for recycling
- Attended 26 public events to provide education on waste reduction and the City's curbside collection program



## TRANSPORTATION

Transportation plays a significant role in the development of sustainable communities. The City's transportation vision seeks to create and support a vibrant, livable, healthy and sustainable community for residents, businesses and visitors. Transportation actions that increase system efficiency, and give priority to walking, cycling, ridesharing, and public transit, can contribute to reductions in GHG emissions and more livable communities.

### 2017 Highlights

- Maintained and serviced 411km of sidewalks, 90km of bicycle lanes, and 84 pedestrian crosswalks to enhance walking and cycling in the City
- Launched the Transportation and Transit Master Plans as part of the Plan 200K initiative, ensuring an integrated transportation network to efficiently sustain a growing, vibrant community.
- Prepared an Electric Vehicle Charging Station Strategy



## WATER AND WASTEWATER

Managing and reducing water consumption and wastewater is an important aspect of developing a sustainable built environment that supports healthy communities, protects ecological integrity, and reduces GHG emissions.

### 2017 Highlights

- Promoted community water conservation through the implementation of water restrictions from May 1st through September 30th
- Continued the Advanced Metering Infrastructure (AMI) water meter program including bimonthly billing
- Continued partnership with BC Hydro for a clothes washer rebate program to reduce home water use and electricity
- Continued partnership with Green Bricks Education Society for providing classroom education for students
- Used rainwater for watering trees and City boulevards





## 3.0 PLANNING

Planning and its associated community and organizational impacts are a key component to implementing a successful municipal sustainability initiative. Planning lays the groundwork for GHG emissions reductions, including city-wide plans such as the Official Community Plan, Master Plans, Neighbourhood Plans and Special Studies. Land use planning that focuses on Smart Growth principles (compact, complete, connected, centred) plays an especially important role in energy and GHG reduction. Sustainable planning on a corporate level directly reflects the City's ability to function as a relevant organization that fosters the ability to meet a key strategic goal of being a complete community that "values our connection with the environment."

### 2017 ACTIONS

#### Plan 200K

The City's OCP reflects the community's planning and growth needs, and ensures alignment between community development and the sustainability framework. In 2017, the City undertook "Plan 200K", a major initiative that plans for a future population of 200,000 while considering the impacts of different development and land use scenarios. This initiative takes improvements into account with respect to building energy efficiencies, vehicle efficiencies, solid waste diversion rates, and currently planned transportation infrastructure. The Plan 200K project included the updating of 20 master plans, neighbourhood plans and studies to align with the OCP.



In 2017, as part of the Plan 200K project, the City completed:

- **Stage 1 and Stage 2 of the Neighbourhood Plans:** City Centre/Historic Downtown/UDistrict
- **Stage 1 of the Master Plans:** City Wastewater/City Water Drainage/Fire Rescue Services/ Parks, Recreation & Culture Transit/ Transportation
- **Stage 1 and stage 2** of the Abbotsford/Mission Joint Wastewater Master Plan
- **Stage 1 of the special studies:** Industrial Land Supply/ Willband Creek Integrated Stormwater Management Plan/ AgRefresh/ Water Source Supply Study



#### **OCP - 7 Big Ideas**

*Abbotsforward is the update of the City of Abbotsford's OCP. Along with updated land use regulations, the new OCP includes a vision, several 'big picture' items and a comprehensive list of policies. The OCP sets the stage for what Abbotsford will be like at 200,000 residents, It embodies the values, priorities, and aspirations of the community, and charts the course for development and implementation of policies. Policy directions are organized around 7 Big Ideas for the future of Abbotsford that comprise the most essential and transformative ingredients of this Plan. The new OCP was adopted by City Council in 2016.*

- The City commenced work on the **Urban Infill Study** to clarify the City's objectives and intent for the Urban 3 – Infill land use designation in the OCP to provide growth near urban centres and the City centre. This initiative applies to approximately 5,600 lots in existing neighbourhoods surrounding Abbotsford's urban core. The OCP provides general direction for redevelopment within this land use; however more detailed zoning regulations and guidelines are needed to provide clarity
- Updated the **Strategic Energy Management Plan** as part of the City's partnership with BC Hydro's Energy Manager Program
- Developed a **green fleet strategy to reduce GHG emissions** associated with the City's vehicle and equipment use
- Commenced work on **energy and GHG reduction projects** identified in the City's Facilities Energy and Greenhouse Gas Assessment and Reduction Plan
- Continued to use **energy accounting software to provide an efficient method of tracking the corporate energy consumption** and continued to support the corporate anti-idling program as part of Fleet Management initiatives
- The City was recognized for its efforts to reduce **GHG emissions by the Green Communities Committee** as part of the corporate Climate Action Charter



## 4.0 BUILDINGS AND LIGHTING

The City of Abbotsford manages 188 municipal buildings including 3 ice surfaces, 6 pools with 460,000 gallons of water, and 1,300,000 square feet of occupied area. The City's goal is to use the minimum amount of energy needed to provide comfort and safety and tap into renewable energy sources for heating, cooling and power. This category also includes initiatives with respect to energy efficient street lights and lights in parks or other public spaces.

### 2017 ACTIONS

- Began work on projects identified in the City's **Facilities Energy and Greenhouse Gas Assessment and Reduction Plan**, which serves as an example to the community
- Encouraged **development within the existing Urban Development Boundary**, as required by the OCP. The OCP Growth Plan notes that all future growth will be contained within the existing Urban Development Boundary, with 75% of future residential growth taking place in centres and existing neighbourhoods, and 25% of future residential growth taking place in new neighbourhoods
- **Partnered with BC Hydro through their Energy Manager Program** to reduce electricity consumption in civic facilities and utilities and updated the City's Strategic Energy Management Plan as part of this partnership
- Staff participated in a one day workshop called **High Performance Profits: How Builders, Manufacturers and Service Providers Can Find Opportunity in the BC Energy Step Code**
- Conducted a feasibility study on the **conversion of street lights to LED technology**

**"Corporate energy projects resulted in reducing energy consumption by over 320,000 kWh annually."**

- Most of the successes in 2017, were completed through the City's Energy and GHG Reduction projects identified in the City's **Facilities Energy and Greenhouse Gas Assessment and Reduction Plan**. Corporate energy reduction projects resulted in reducing energy consumption by over 320,000 kWh annually. Projects in 2017 included energy upgrades at the following facilities: Matsqui Recreation Centre (MRC); the Abbotsford Centre; City Hall and the Abbotsford Mission Recycling Depot



- Several projects in 2017 supported alternative energy use:
  - **Methane capture for space and process heat production** at the JAMES Wastewater Treatment Plant
  - **Biosolids beneficial use** through land application
  - **Geothermal energy** at the Reach Gallery and Museum

**“Reducing emissions and increasing the use of renewable and alternative energy sources are key components to a sustainable community. Abbotsford will continue to pursue sources that provide a **cost-effective and efficient delivery of programs and services.**”**



## 5.0 PARKS AND OPEN SPACES

Parks and open spaces refers to parks, greenways, boulevards, community forests, urban agriculture, and other naturally occurring areas. These spaces are among Abbotsford's defining features and support the environmental, physical, social and visual aspects of the City. Parks and open spaces play a key role in meeting the City's Complete Community priority identified in the corporate strategic plan.

### 2017 ACTIONS

- Encouraged the inclusion of community gardens in proposed developments
- Created two new parks in the Auguston area (Shadbolt Park and Emily Carr Greenway)
- Continued implementation of the Natural Environment Development Permit (NEDP) and Steep Slope Development Permit (SSDP) area guidelines to help conserve greenspace during development
- Continued work on a comprehensive update to the Zoning Bylaw to align it with the new policies/visions of the updated OCP
- Restored various park areas with volunteers and community partnerships including the Fraser Valley Watershed Coalition, Fraser Valley Conservancy, Abbotsford Mission Nature Club, and the Abbotsford Ravine Park Salmon Enhancement Society
- Provided education and initiated bylaw enforcement regarding invasive species reported on private property, including efforts aimed at reducing the spread of Knotweed

**"Planted 1,600 trees, 39,607 bulbs, 37,836 annuals, 400 perennials/small shrubs and 5lbs of wildflower seeds within various locations around the City.**



- Worked with **Abbotsford-Mission Nature Club** on grant for Willband Creek Park
- Received a grant to plant an **orchard at community garden**
- Partnered with the **FVRD in their Invasive Weed Control Program** targeting Wild Chervil, Tansy Ragwort, Giant Hogweed and Knotweed
- Maintained **192 parks in the community covering 842 hectares** supporting sport, play and recreation for a complete community with an enhanced quality of life
- Maintained **98 kilometres of trails** which support active transportation and living opportunities
- Received several funding grants to **improve the resources for our urban tree canopy** including \$57,000 for restoration and innovative forestry initiatives, \$6,000 from CN EcoConnexions From the Ground Up for Arbour Day and \$25,000 from TD Tree Days
- Continued to **control invasive species on City property.** Aggressive control efforts of Himalayan Blackberry was undertaken throughout municipal parks and included manual removal, mechanized cutting or mowing, herbicide application and competitive/suppressive planting. Knotweed was controlled through cutting, pulling or herbicide application and was prioritized based on environmental impact
- Continued the **support of invasive species removal by volunteer groups**, with efforts focused on manual removal of Himalayan Balsam, English Ivy, and Dead Nettle



## 6.0 SOLID WASTE

Sustainable solid waste management and service delivery are a priority for a sustainable community. Reducing, reusing, recycling, recovering and managing the disposal of the residual solid waste minimizes environmental impacts and supports greenhouse gas reductions, and improved air and water quality.

### 2017 ACTIONS

- Provided **public education regarding the residential curbside collection** program and waste reduction at local community events
- Implemented an **enhanced communication strategy to promote participation and increase awareness** on proper sorting requirements, contamination reduction, waste reduction and Recycle BC program changes
- Began **consultation on the proposed compostables collection requirements** for the multi-family and industrial, commercial and institutional (ICI) sectors. Program requirements will be developed in partnership with the FVRD in order to realize synergies and to ensure consistent messaging across the region
- Continued the **partnership with Abbotsford Community Services for providing classroom education** for students in Pre-K to grade 8 regarding recycling and waste diversion. In 2017, provided education to a total of **1,721 students** (1,358 in grades Pre-K to 3, and 363 in grades 4 to 8)
- Continued the **partnership with Abbotsford Community Services for presentations to special interest groups regarding recycling and waste diversion**. In 2017, provided presentations to **299 participants** ranging in age from elementary school to adult



- Continued the **partnership with Abbotsford Community Services for providing recycling information** at 17 public events, and for delivering the annual Environmental Mind Grind event attended by 84 attendees
- Joined the **provincial Recycle BC recycling program** which allowed for an **expanded list of materials to be accepted for recycling**
- Commenced work on the **Solid Waste Operating Management Plan** to assess current operations and to consider options for changes and enhancements to the program
- Participated in the **FVRD Solid Waste Action Team and the Metro Vancouver Municipal Waste Reduction Coordinators Committee**

- Continued **education and enforcement** of recycling and composting initiatives
- Continued **source separation of recyclables and compostables** in the City's curbside collection program
- Continued **collection of compostable waste at City Hall and the Operations Work Yard**
- Completed a **comprehensive solid waste audit** for materials collected from the curbside program including garbage, compostable waste and recycling

**“Diverted over 11,000 tonnes of compostable waste and 4,800 tonnes of recyclables through the curbside collection program.”**





## 7.0 TRANSPORTATION

Transportation plays a significant role in the development of sustainable communities. The City's 2007 GHG inventory shows transportation as being the highest contributor to GHGs. As such the OCP sets a target of 25% of all trips being made without a vehicle, within the lifespan of the plan. The City's transportation vision seeks to create and support a vibrant, livable, healthy and sustainable community for residents, businesses and visitors. Transportation actions that increase system efficiency, emphasize the movement of people and goods, and give priority to walking, cycling, ridesharing, and public transit, can contribute to reductions in GHG emissions and more livable communities.

### 2017 ACTIONS

- Launched the **Transportation and Transit Master Plans** as part of the Plan 200K initiative. This will provide for an integrated transportation network that will efficiently handle a growing, vibrant community with an increasing number of modal movements and modal shifts that will develop as the City grows
- Continued to encourage car share and vehicle charging stations in development applications
- Maintained and serviced **411km of sidewalks, 90km of bicycle lanes, and 84 pedestrian crosswalks** to enhance walking and cycling in the City
- Launched **Abbotsford Walks program**; a free, fun program for local neighbourhood walks, contributing to a vibrant, healthy community and fostering connections between neighbours
- Installed **count-down timers and rapid flashing beacons** at crosswalks to improve pedestrian safety
- Implemented a **crosswalk and road marking program** which will see 560 locations marked – 140 annually to increase community safety
- Partnered with ICBC on **6 traffic signal improvements and 4 sidewalk construction projects** to ensure the city's transportation network operates efficiently and safely



- Carried out **sidewalk and transit stop improvements**, including two bus shelters, to enhance walking and public transit
- Received a **\$30,000 grant from BC Healthy Communities** for a Walk Abbotsford Initiative
- Received approval to **upgrade 20 crosswalks** city-wide
- Announced the **Salton Road Pedestrian/Cycling Bridge** project to improve mobility and safety for pedestrians and cyclists and enhance our active transportation system
- Continued the City's **vehicle replacement program** to replace older, less fuel-efficient vehicles with newer, more fuel-efficient vehicles and with best in class fuel efficiency, where possible
- Continued to **encourage participation in programs promoting cycling, walking and reduction in GHG emissions** (e.g., Commuter Challenge, City carpool program, City anti idling policy, etc.)
- Developed a **green fleet strategy** to reduce GHG emissions associated with the City's vehicle and equipment use
- Modified the **dual electric vehicle charging station to allow both sides to be accessed for public charging** (previously one side was designated for City vehicle use only)
- Prepared an **EV Charging Station Strategy**
- Secured \$57,000 from Federation of Canadian Municipalities and \$12,000 grant from the FVRD for a **Municipal Green Fleet Strategy**



## 8.0 WATER AND WASTEWATER

Managing and reducing water consumption and wastewater is an important aspect of developing a sustainable built environment that supports healthy communities, protects ecological integrity, and reduces GHG emissions.

### 2017 ACTIONS

- Continued the **water conservation program** including the implementation of water restrictions from May 1st through September 30th
- Continued the **Advanced Metering Infrastructure (AMI) water meter** program including bimonthly billing. Installed 525 new water meters in 2017
- Continued to **work with residents to identify and resolve water leaks**. In 2017, the City processed **6,123 water leak notifications** (based on 10L/hr over 3 days)
- Continued the partnership with **BC Hydro for the clothes washer rebate program** to reduce home water use and electricity. In 2017, **200 rebates** were issued to homeowners who replaced their less efficient (water and electricity) washer for a new efficient model
- Ran a **residential toilet rebate program** and provided 587 rebates to homeowners that replaced old toilets with a low-flow toilet to reduce residential water use
- Provided a **subsidy for 60 rain barrels and 70 indoor/outdoor water saving kits**
- Provided **community outreach and water conservation education** at 32 public events
- Hosted an event for Drinking Water Week that included the **presenting of water system and water conservation** information to 200 students



- Continued the **partnership with Green Bricks Education Society for providing classroom education for students** (grade 4, grade 10 and adult ESL) regarding the water system, water quality and conservation. In 2017, provided education to 1375 grade 4 students, 850 grade 10 students, and 140 adult ESL students
- Received **\$10M in Provincial funding to address Fraser River erosion issues** ensuring the community is protected from flooding threats, and an additional \$200,000 in combined Provincial and Federal funding for a geotechnical assessment of the dykes to further enhance our flood protection infrastructure
- The City did not water the grass at civic facilities, and left its **passive lawn areas to go dormant** in the summer
- Used **rainwater for watering trees and City boulevards** and the fields at Abbotsford Exhibition Park, through the use of large scale rainwater harvesting tanks at the Public Works Yard
- Continued to **participate in the Metro Vancouver Municipal Water Conservation Coordinator Committee**. The meetings provide a valuable networking opportunity with other municipalities and to discuss initiatives, progress, updates in policies share resources and best practices
- Contracted land application to **beneficially use 5,500 tonnes of biosolids**
- Continued **methane capture for space and process heat production** at the JAMES Wastewater Treatment Plant
- Conducted over **360 inspections and collected over 1,000 samples to ensure protection of sanitary sewer system** and the integrity of the infrastructure
- Conducted over **9,300 internal laboratory tests to ensure wastewater discharge regulatory requirements** were met and that the City water supply is clean, and our asset is protected and running efficiently

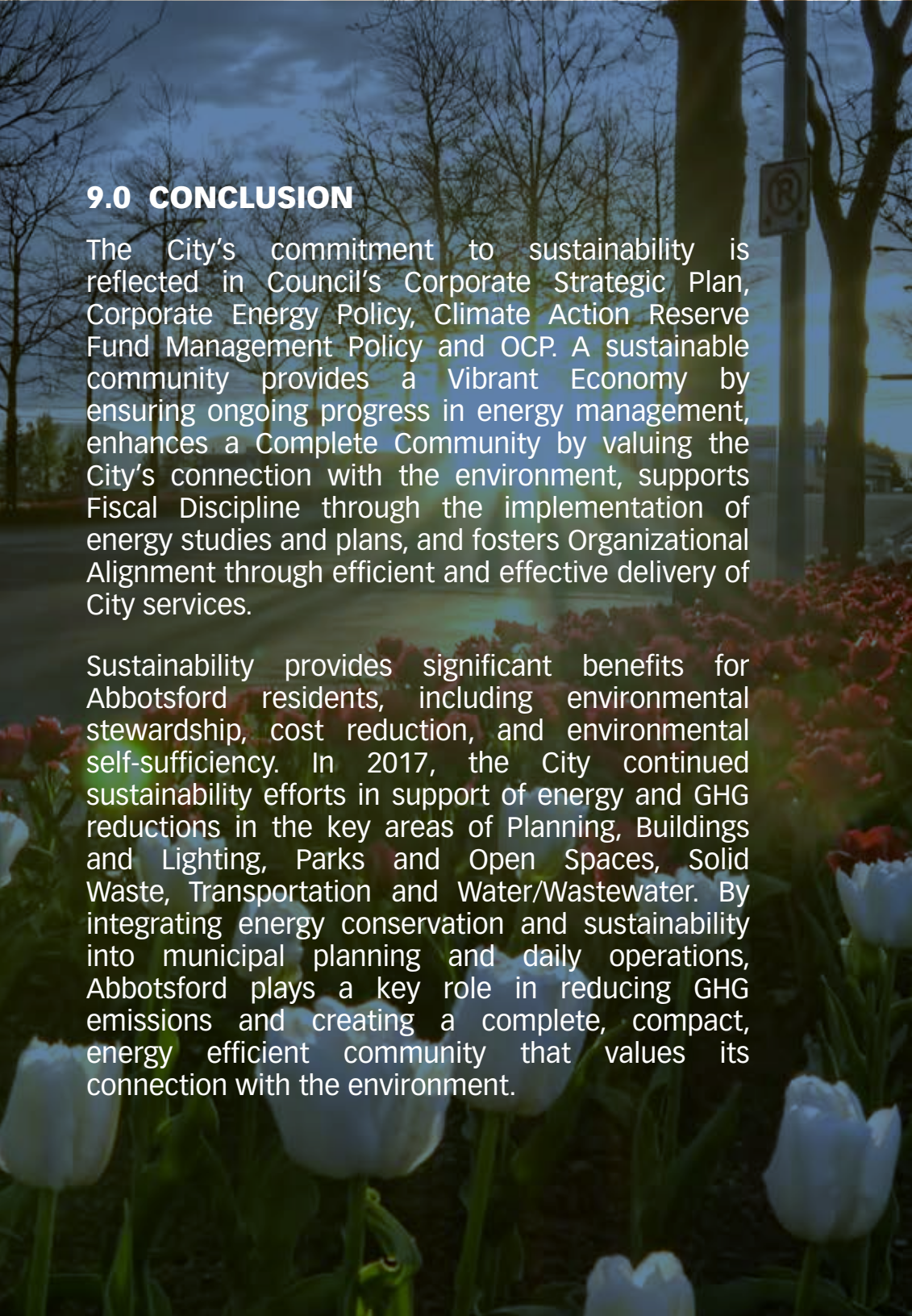




## 9.0 CONCLUSION

The City's commitment to sustainability is reflected in Council's Corporate Strategic Plan, Corporate Energy Policy, Climate Action Reserve Fund Management Policy and OCP. A sustainable community provides a Vibrant Economy by ensuring ongoing progress in energy management, enhances a Complete Community by valuing the City's connection with the environment, supports Fiscal Discipline through the implementation of energy studies and plans, and fosters Organizational Alignment through efficient and effective delivery of City services.

Sustainability provides significant benefits for Abbotsford residents, including environmental stewardship, cost reduction, and environmental self-sufficiency. In 2017, the City continued sustainability efforts in support of energy and GHG reductions in the key areas of Planning, Buildings and Lighting, Parks and Open Spaces, Solid Waste, Transportation and Water/Wastewater. By integrating energy conservation and sustainability into municipal planning and daily operations, Abbotsford plays a key role in reducing GHG emissions and creating a complete, compact, energy efficient community that values its connection with the environment.



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