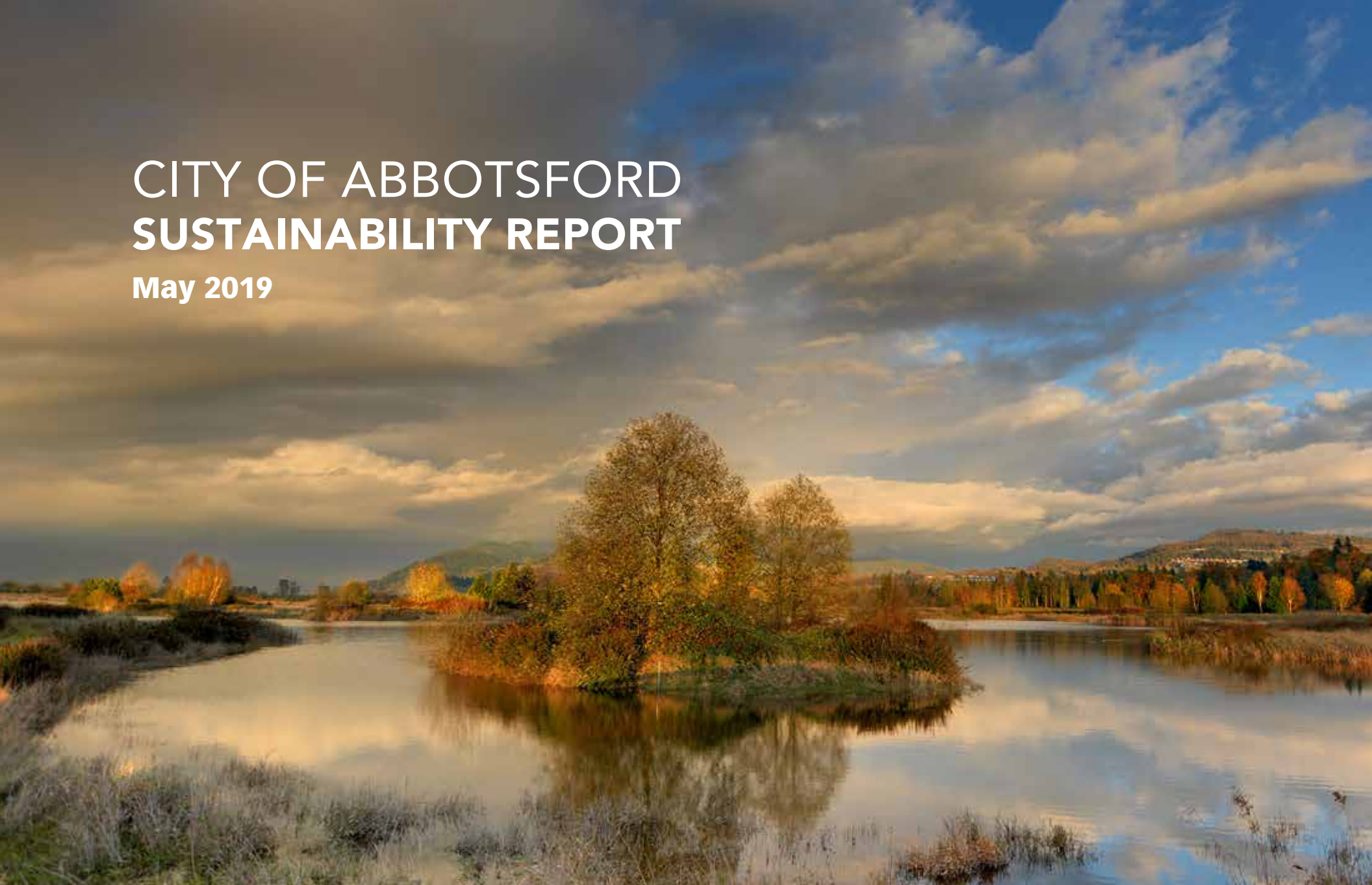


CITY OF ABBOTSFORD SUSTAINABILITY REPORT

May 2019







CITY OF ABBOTSFORD
2018 SUSTAINABILITY REPORT

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1.0 INTRODUCTION

The City of Abbotsford is the fifth 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 Strategic Plan, Corporate Energy Policy and Climate Action Reserve Fund Management Policy. Sustainability provides significant benefits for Abbotsford residents, including environmental stewardship, community health, cost reduction, and environmental self-sufficiency.

Climate action is a federal and provincial priority and local governments are key partners in helping to reduce greenhouse gas (GHG) emissions and create complete, compact, energy efficient communities. The 2018 Sustainability Report highlights the City's environmental commitment by presenting sustainability actions that the City has taken. 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 2018.

2.0 2018 SUSTAINABILITY HIGHLIGHTS

PLANNING

Planning sets the stage for GHG emission reductions, including city-wide plans such as the Official Community Plan, Master Plans and Neighbourhood Plans. Planning enables the City to meet its key Strategic Plan Principle of being a complete community that values connection with the environment.

2018 HIGHLIGHTS

- Completed Master Plans for all three of the major City utilities.
- Continued progress on several key Neighbourhood Plans including the completion of the City Centre, Historic Downtown and UDistrict plans.
- Continued development of a green fleet strategy to reduce GHG emissions associated with the City's vehicle and equipment use.
- Continued to use energy accounting software to provide an efficient method of tracking the City's corporate energy consumption.
- Recognized as a Smart21 community, moving the City forward in being more connected, engaged, inclusive and sustainable.



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.

2018 HIGHLIGHTS

- Continued work on corporate energy reduction projects, reducing energy consumption by over 400,000 kWh annually.
- Encouraged development within the Urban Development Boundary in alignment with the OCP, with increased densification along the Primary Transit Corridor.
- Continued to partner with BC Hydro through the Energy Manager Program to reduce electricity consumption in civic facilities and utilities.
- Completed a feasibility study on the adoption of the Energy Step Code and electric vehicle readiness in new houses.
- Completed a pilot project converting 120 street lights to LED.



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.

2018 HIGHLIGHTS

- Restoration of 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.
- Continued implementation of the Natural Environment Development Permit (NEDP) and Steep Slope Development Permit (SSDP) area guidelines to help conserve greenspace during development.
- Earned a "5 Bloom" rating in the national Communities in Bloom program.
- Completed the Parks, Recreation and Culture Master Plan as part of the Plan 200K initiative.



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 greenhouse gas reductions, and improved air and water quality.

2018 HIGHLIGHTS

- Continued 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.
- Diverted from landfill approximately 4,900 tonnes of recyclables and 12,600 tonnes of compostable waste through the curbside collection program.
- Attended 28 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, emphasize the movement of people and goods, and give priority to walking, cycling, ridesharing, and public transit, can contribute to reductions in greenhouse gas emissions and more livable communities.

2018 HIGHLIGHTS

- Maintained and serviced 412km of sidewalks, 98km of bicycle lanes, and 89 pedestrian crosswalks to enhance walking and cycling in the City.
- Completed the Transportation and Transit Master Plans as part of the Plan 200K initiative. This will ensure there is a transportation plan for an integrated transportation network that will efficiently handle a growing, vibrant community.
- Began implementation of the Electric Vehicle Charging Station Strategy, including the installation of ten charging stations over five years at various civic facilities.
- Completed the installation of the Salton Road Pedestrian/Cycling Bridge project to improve mobility and safety for pedestrians and cyclists and enhance our active transportation system.



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 greenhouse gas emissions.

2018 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 in ice making, flushing toilets, and watering trees and boulevards.
- Launched the Waterwise portal for residents and business owners to view their water consumption online.
- Completed the following Master Plans as part of the Plan 200K initiative: City Water, City Wastewater, Abbotsford-Mission Joint Water, and Abbotsford-Mission Joint Wastewater.



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 through 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 reductions. Through plan development and implementation, the City meets a key Strategic Plan Principle of being a complete community that values our connections with the environment.

2018 ACTIONS

Plan 200K

The City's Official Community Plan reflects the community's planning and growth needs, and ensures alignment between community development and the sustainability framework. In 2017, the City began "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 2018, as part of the Plan 200K project, the City completed:



Stage 3 and stage 4 of the Neighbourhood Plans:

- City Centre;
- Historic Downtown; and
- UDistrict.

Stage 2, stage 3 and stage 4 of the Master Plans:

- Parks, Recreation & Culture;
- Fire Rescue Services;
- Transit;
- City Water;
- City Wastewater;
- Transportation;
- Abbotsford-Mission Joint Water;
- Abbotsford-Mission Joint Wastewater; and
- Drainage.



Other Actions

- The City continued progress on the AgRefresh and Water Source Supply studies as part of the Plan 200K initiative.
- The City continued work on the Urban Infill Study to clarify the City's objectives and intent for the Urban 3 – Infill land use designation in the Official Community Plan (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.
- Continued work on energy and GHG reduction projects identified in the City's Facilities Energy and Greenhouse Gas Assessment and Reduction Plan.
- Continued development of a green fleet strategy to reduce GHG emissions associated with the City's vehicle and equipment use
- The City 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, as well as environmental engagement of staff.
- The City was recognized for its efforts to reduce GHG emissions by the Green Communities Committee as part of the corporate Climate Action Charter.
- Updated the Strategic Plan which will set the direction and framework for the work the City will undertake over the next 4 years. All City activities and municipal planning decisions, departmental business plans, budgets and progress are guided by the plan.
- The City was recognized as a Smart 21 community, moving us forward in being more connected, engaged, inclusive and sustainable.



4.0 BUILDING & LIGHTING

The City of Abbotsford manages 188 municipal buildings which include 3 ice surfaces, 6 pools with 460,000 gallons of water and 1,300,000 square feet of occupied area. The main goal of the City 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.

2018 ACTIONS

- The City continued 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 residential 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.
- The City 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 the City's partnership with BC Hydro's Energy Manager Program.
- The City completed a feasibility study on the adoption of an approach to the BC Energy Step Code.

"Corporate energy projects resulted in in reducing energy consumption by over 400,000 kWh annually."



- Completed a pilot project converting 120 street lights to LED. The City's five year financial plan includes replacing 6,259 of the City's high pressure sodium street lights with energy efficient LED technology, over a four year period
- Most of the successes in 2018 were completed through the City's Energy and GHG Reduction projects identified in the City's Facilities:
 - LED lighting upgrades at Clearbrook Library/UFV, the Reach and the Police Annex;
 - LED lighting upgrade at ARC;
 - Mechanical upgrades at Clearbrook Library, Exhibition Park, Matsqui Centennial Auditorium and five Fire Halls;
 - Mechanical optimization at City Hall and the King Road Works Yard; and
 - Mechanical upgrades and optimization at the Police Building and the Police Annex.

- Several projects in 2018 supported alternative energy use:
 - Methane capture for space and process heat production at the JAMES Wastewater Treatment Plant;
 - Methane capture from the Trethewey Landfill for space heating at the Ag Rec;
 - Land application to beneficially use biosolids; and
 - Geothermal energy at the Reach Gallery and Museum.



5.0 PARKS & 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.

2018 ACTIONS

- The City earned a "5 Bloom" rating in the provincial Communities in Bloom program.
- Acquired management of local Metro Vancouver Regional District parks including Matsqui Trail, Sumas Mountain and the eastern portion of Glen Valley Regional Park.
- Completed major restoration, clean-up and tree work from the 2017/2018 wind and ice storms.
- The City encouraged the inclusion of community gardens in proposed developments.
- 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.
- Continued to work on the review of urban agriculture under the AgRefresh initiative.
- 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.
- Completed the Parks, Recreation and Culture Master Plan as part of the Plan 200K initiative.
- Received \$7,000 from TD Tree Day to plant 400 trees and \$5,000 from the Trans Canada Trail for planning of the Willband Connector Trail.

"Maintained 192 parks covering 842 hectares and over 98 kilometres of trails.



- Provided education and initiated bylaw enforcement regarding invasive species reported on private property, including efforts aimed at reducing the spread of Knotweed.
- 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 over 98 kilometres of trails which support active transportation and living opportunities.
- Planted 800 new trees at various locations around the City.
- Began using an electric chainsaw and electric hedge trimmer in place of two-stroke gas powered equipment. This electric equipment is also charged using solar power at the Operations Yard.
- 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 wand 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.
- Continued use of solar power for lighting requirements at the Urban Forestry Workshop.



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.

2018 ACTIONS

- Continued participation in the provincial Recycle BC recycling program allowed for an expanded list of materials to be accepted for recycling.
- Continued implementation of an enhanced communication strategy to promote participation and increase awareness on proper sorting requirements, contamination reduction, waste reduction and Recycle BC program changes.
- Continued work on the Solid Waste Operating Master 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 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.
- Diverted over 12,500 tonnes of compostable waste and 4,800 tonnes of recyclables through the curbside collection program, resulting in a curbside diversion rate of 66%.
- 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, and recyclables collection at all civic facilities.
- Continued use of landfill gas generated from the Trethewey Landfill for space heating at the Ag Rec building.
- Provided public education regarding the residential curbside collection program and waste reduction at 28 local community events.

“Diverted over 12,500 tonnes of compostable waste and 4,800 tonnes of recyclables through the curbside collection program.”

- 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 2018, provided education to a total of 2,099 students (1,577 in grades Pre-K to 3, 210 in grades 4 to 7, and 312 in grades 8 to 12).
- Continued the partnership with Abbotsford Community Services for presentations to special interest groups regarding recycling and waste diversion. In 2018, provided 16 presentations to 370 participants ranging in age from elementary school to adult.
- Continued the partnership with Abbotsford Community Services for providing recycling information at 16 public events, and for delivering the annual Environmental Mind Grind event.
- Continued to provide residents with the Curbside Collection App to access collection schedules and sorting information through smartphones and the web. In 2018, residents looked up waste sorting information for over 68,000 items.



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 greenhouse gas emissions and more livable communities.

2018 ACTIONS

- Completed 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.
- Received the Bill Curtis Award for Transportation Project of the Year from the Greater Vancouver Section of the Canadian Institute of Transportation.
- Completed the installation of the Salton Road Pedestrian/Cycling Bridge project to improve mobility and safety for pedestrians and cyclists and enhance our active transportation system.
- Maintained and serviced 412km of sidewalks, 98km of bicycle lanes, and 89 pedestrian crosswalks to enhance walking and cycling in the City.
- Installed 8.2km of new bike lanes on McKee Drive and improved pedestrian crossings.
- Installed count-down timers and rapid flashing beacons at crosswalks to improve pedestrian safety.
- Continued progress on a crosswalk and road marking program which will see 560 locations marked – 140 annually to increase community safety.



- Partnered with ICBC on the signalization of the intersection at Mt Lehman Rd and Downes Rd and 5 sidewalk construction projects to ensure the city's transportation network operates efficiently and safely.
- Continued improvements to crosswalks, sidewalks and transit stops to enhance walkability and transit access in the community.
- 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 car share and vehicle charging stations in development applications.
- 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.).
- Continued development of a green fleet strategy to reduce GHG emissions associated with the City's vehicle and equipment use.
- Continued providing a dual electric vehicle charging station for the public at City Hall, and began the installation of four Level 2 charging stations with eight charging heads at City Hall.
- Began implementation of the EV Charging Station Strategy, including the installation of ten charging stations over five years at various civic facilities.

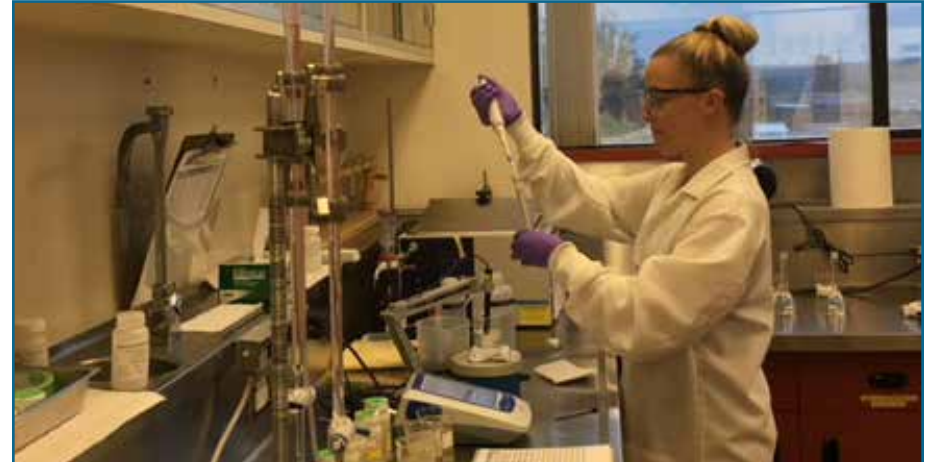


8.0 WATER & WASTEWATER

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 greenhouse gas emissions.

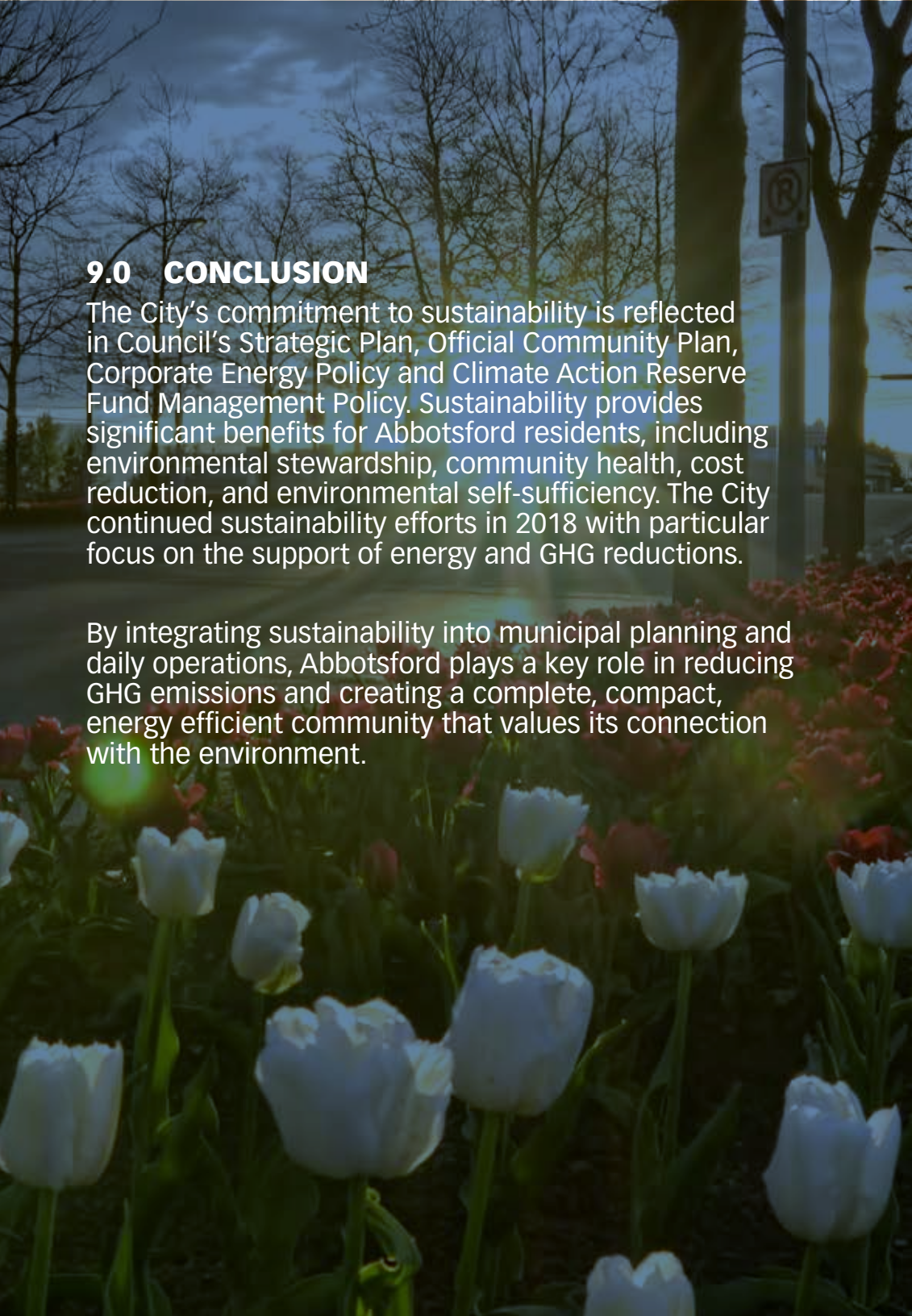
2018 ACTIONS

- Continued the water conservation program including the implementation of ongoing water restrictions from May 1st through September 30th. In 2018, the residential demand was 179 L/c/d resulting in a 1.3% reduction in residential water usage compared to 2017.
- Continued the Advanced Metering Infrastructure (AMI) water meter program including bimonthly billing. Installed 81 new water meters in 2018.
- Continued to work with residents to identify and resolve water leaks. In 2018, the City processed 3,957 water leak notifications (based on 10L/hr over 3 days) and sent approximately 2,084 final meter reads.
- Continued the partnership with BC Hydro for the clothes washer rebate program to reduce home water use and electricity. In 2018, 153 rebates were issued to homeowners who replaced their less efficient (water and electricity) washer for a new efficient model.
- Offered a residential toilet rebate program and provided 387 rebates to homeowners that replaced old toilets with a low-flow toilet to reduce residential water use.
- Provided a subsidy for 30 rain barrels and 50 indoor/outdoor water saving kits.
- Provided community outreach and water conservation education at 35 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 2018, provided education to approximately 1,525 grade 4 students, 900 grade 10 students, and 100 adult ESL students.
- The City completed a geotechnical assessment of the dykes along the Fraser River to further enhance our flood protection infrastructure, and began work on a project to finalize and implement the long term solution for bank stabilization along a 2.5km reach of the river.
- The City did not water the grass at civic facilities, and left its passive lawn areas to go dormant in the summer.
- Collected rainwater at the Abbotsford Centre, Tradex and Operations Yard for use in ice making, flushing toilets, and watering trees, boulevards and nursery plants.”
- 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 4,200 tonnes biosolids.
- Continued methane capture for space and process heat production at the JAMES Wastewater Treatment Plant.
- Conducted over 360 business inspections and collected over 1,800 wastewater samples to ensure protection of the sanitary sewer system and integrity of the infrastructure.
- Conducted over 12,800 internal laboratory tests to ensure protection of the receiving environment and to ensure regulatory wastewater discharge requirements were met.
- Collected over 2,500 samples and conducted over 11,800 internal laboratory tests to ensure the City drinking water supply is clean, and our asset is protected and running efficiently.
- Launched the Waterwise portal for residents and business owners to view their water consumption online.





9.0 CONCLUSION

The City's commitment to sustainability is reflected in Council's Strategic Plan, Official Community Plan, Corporate Energy Policy and Climate Action Reserve Fund Management Policy. Sustainability provides significant benefits for Abbotsford residents, including environmental stewardship, community health, cost reduction, and environmental self-sufficiency. The City continued sustainability efforts in 2018 with particular focus on the support of energy and GHG reductions.

By integrating 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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SUSTAINABILITY REPORT
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ABBOTSFORD

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