



Climate Action Revenue Incentive Program (CARIP) Public Report, 2018



The City of Vernon became a signatory of the British Columbia ***Climate Action Charter*** in 2008. As a participating local government, Vernon is committed to lowering greenhouse gas (GHG) emissions, taking actions that demonstrate leadership on sustainable development, reporting annually on the City's progress towards these goals and achieving carbon neutrality in corporate emissions.

As part of the BC Climate Action Charter, local governments are eligible to receive conditional grant funding through the ***Climate Action Revenue Incentive Program*** (CARIP). CARIP reimburses the carbon tax paid by local governments and requires that municipalities measure corporate carbon emissions and annually report on their corporate and community wide sustainability actions. Vernon has undertaken CARIP reporting annually since 2010.

Provincial requirements for the 2018 CARIP Climate Action/Carbon Neutral Progress Survey include:

- Local governments are required to submit the *2018 CARIP Climate Action/Carbon Neutral Progress Survey* on or before June 1, 2019.
- Local governments are also required to publicly report the information submitted in the *2018 CARIP Climate Action/Carbon Neutral Progress Survey*.

Further information on CARIP can be found on the [Ministry of Municipal Affairs and Housing website](#).

The following report is based on the 'Survey Template for the 2017 Climate Action/Carbon Neutral Progress Survey' as directed by the Province of BC.

The City of Vernon has completed the 2018 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2018 and proposed for 2018 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG) and reports on progress towards achieving carbon neutrality.

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2018 BROAD PLANNING ACTIONS

Broad Planning Actions

Broad Planning refers to high level planning that sets the stage for GHG emissions reductions, including plans such as Official Community Plans, Integrated Community Sustainability Plans, Climate Action Plans or Community Energy Emissions Plans. Land use planning that focuses on Smart Growth principles (compact, complete, connected, and centered) plays an especially important role in energy and GHG reduction.

Q 6 + Q 7 Community-Wide Broad Planning Actions Taken in 2018 + Additional Actions	
	<i>Climate Action Plan:</i> Initiated Climate Action Advisory Committee to support development of a Climate Action Plan. Developed planning process and background information.
	<i>Lake Access Planning:</i> Detailed design for new access sites to connect Vernon residents to Okanagan Lake.
	<i>Continued Parks Master Plan Implementation:</i> Continued implementation of the Parks Master Plan with focus on providing new park spaces and improvements to existing park spaces. Details are provided in other sections of this document.
	<i>Continued Transportation Master Plan Implementation:</i> Continued implementation of the Transportation Master Plan. Details are provided in other sections of this document.
	<i>Continued Implementation of the Official Community Plan:</i> The official community plan mandates reduced sprawl and focuses on developing sustainable and green communities through thoughtful development
	<i>Sustainability Events Program:</i> Working in partnership with community groups, schools and other organizations to enhance community sustainability. Tree planting Voucher program. Sustainability grants program.
	Recreation Programming and Facilities Master Plan development. The process included a review of recreation facilities, program services and developing the Greater Vernon Recreation Services with long term direction with regards to provision of recreation facilities, active lifestyle opportunities and services to meet current and future needs (2018 – 2033) of Greater Vernon residents and visitors.
Q 8 Community-Wide Broad Planning Actions Proposed for 2019	
	<i>Climate Action Plan Development</i> - community engagement and consulting studies to support the development of a Climate Action Plan. This plan will integrate emissions reduction and adaptation actions along with pulling together much of the work that the City is currently undertaking.
	<i>Redevelopment of Polson Park Master Plan</i>
	<i>New Civic Arena Park: Development of Plan</i> for park construction in 2020
	<i>Redevelopment of Kin Racetrack Lands:</i> develop plan for redevelopment of this site for recreation, parks, housing and employment lands
	<i>Continued Transportation Master Plan Implementation:</i> Continued implementation of the Transportation Master Plan, including trail linkages and establishing connections to the regional Okanagan Rail Trail. Details are provided in other sections of this document.
	<i>Explore expanded Waste Diversion Opportunities:</i> review outcomes of organics diversion pilot and provide options to expand the program.
	<i>Waterfront Neighbourhood Centre Plan Implementation Strategy:</i> The development of more refined transportation and infrastructure plans, including a funding strategy, as well as refined

	approaches to land use and zoning to facilitate development in this neighbourhood. The development of the Waterfront Neighbourhood Centre is a key component of the growth strategy of the OCP.
	<i>McMechan Reservoir Planning:</i> The City is working with a land developer to create a vision for the redevelopment of a former water reservoir site. The vision includes a compact residential neighbourhood that is designed for pedestrians first, includes a new neighbourhood park, and employs alternative development standards. The intent is to create an affordable residential neighbourhood that promotes alternative transportation and reduces greenhouse gas emissions.

Q 9 + Q 10 Corporate Broad Planning Actions Taken in 2018 + Additional Actions	
	Work internally to identify projects through the Climate Action Revolving Fund
	Climate Action Plan initiation
Q 11 Corporate Broad Planning Actions Proposed for 2019	
	Continued development of Climate Action Plan
	Continued implementation of the Climate Action Revolving Fund to identify and fund areas for action in GHG reductions.

Broad Planning		
Q 12 What is (are) your current GHG reduction target(s)?	(Please provide details here)	
	The Official Community Plan (OCP) has established goals of 2% annual reductions in GHG emissions until 2018, and a net decrease of 35% by 2050 relative to 2007 baseline emissions levels. We are currently reviewing these through the Climate Action Plan process.	
Q 13 Are you familiar with your local government's community energy and emissions inventory (e.g. CEEI or another inventory)?		Yes
Q 14 What plans, policies or guidelines govern the implementation of climate mitigation in your community?		
<ul style="list-style-type: none"> Community Energy and Emissions Plan Integrated Community Sustainability Plan Community- Wide Climate Action Plan Official Community Plan Regional Growth Strategy Do not have a plan Other: In the process of developing the CEEP and CAP. OCP integrates broad community sustainability. 		No No No Yes Yes No No
Q 15 Does your local government have a corporate GHG reduction plan?		No

2018 BUILDING AND LIGHTING ACTIONS

Building and Lighting Actions

Low-carbon buildings use the minimum amount of energy needed to provide comfort and safety for their inhabitants and tap into renewable energy sources for heating, cooling and power. These buildings can save money, especially when calculated over the long term. This category also includes reductions realized from energy efficient street lights and lights in parks or other public spaces.

Q 16 + Q 17 Community-Wide Building and Lighting Actions Taken in 2018 + Additional Actions	
	Participate in the step code peer network to learn about implementation and step code generally.
	Optimization of spray irrigation effluent re-use program on: lands used by farmers, three golf courses, sports playing fields, and two tree nurseries
Q 18 Community-Wide Building and Lighting Actions Proposed for 2019	
	<i>BC Energy Step Code:</i> Provide Council with an introduction to the BC Energy Step Code (BCESC) and collaborate on a regional approach currently underway in the Okanagan to implement the BCESC. Improving energy efficiency in buildings, which accounts for approximately 30% of Vernon's community GHG emissions (2010 CEEI), is instrumental for the City to achieve its GHG emissions reduction targets. Recent changes to provincial building regulations have enabled the BCESC as the only mechanism for local governments to require energy efficiency improvements for new construction. As such, building and sustainability officials in the Okanagan have initiated discussions for a regional Step Code approach. Vernon submitted its intention to consult on the BCESC to the province, along with a growing list of communities in BC, and will continue to collaborate with regional partners on the implementation of the BCESC.
	Implement Builder Training on Step Code requirements.
	Conduct a CEEP through the Climate Action Plan that will identify key areas for action in reducing emissions in buildings.

Q 19 + Q 20 Corporate Building and Lighting Actions Taken in 2018 + Additional Actions	
	Recreation Services took measures to increase energy efficiency including: upgrade to a safer and more efficient plate and frame chiller exchanger system from shell and tube chiller exchanger system; install light motion sensors at the Priest Valley Arena dressing room; upgrade the Aquatic Leisure Centre's hot tub pool heat exchange; provide staff training for the heat automation system; install variable speed ozone pool pump and the demolition of the Civic Arena.
	Replace old lighting fixtures with LED technology where appropriate at the Vernon Water Reclamation Centre
	City Facilities installed a variety of updates to increase facility efficiencies, including: comprehensive street light replacement project – Phase 1; upgrade HVAC at Firehall 2; replacement of all interior CFL exit signs with LED at City Hall; increased R value at Firehall 2 – FH 2 Garage (new ESS Building) through windows and insulation; replacement of windows at Operations; replacement of skylights at Community Services Building (CSB); and upgrade of R value at CSB by installation of new roofing system (R-20 to R-40).
	Replacement of outside doors with better R value and seals at City Facilities.
Q 21 Corporate Building and Lighting Actions Proposed for 2019	
	The City of Vernon was selected by B.C. Hydro to be part of a Strategic Energy Management Cohort to assist eligible industrial customers to identify potential energy savings, improvements which if implemented would result in energy savings.
	Replacement of two spray irrigation pumps and one 200 Hp motor to improve pumping efficiency and reduce power usage
	Upgrade existing chlorine system at water reclamation plant to improve efficiency
	Priest Valley Recreation Center compressor upgrade
	Aquatic Centre office HVAC and window upgrade
	Replacement of Lakeview Pool
	City facilities continue to evaluate and implement areas that can increase efficiency

	Replacement of overhead doors at Fire Hall # 1&2 with better R value and sealing around doors.
	Replacement of radiant heaters in Fleet area with two stage heaters to reduce gas consumption.
	Continue to replace incandescent and fluorescent lighting with LED lighting.
	Replacement of outside man doors with higher R value doors and better sealing around the door Operations.
	New RTU for Operations renovation to replace old unit heaters.

Building and Lighting The Province has committed to taking incremental steps to increase energy-efficiency requirements in the BC Building Code to make buildings net-zero energy ready by 2032. The BC Energy Step Code--a part of the BC Building Code--supports that effort	
Q 22 Is your local government aware of the BC Energy Step Code?	Yes
Q 23 Is your local government implementing the BC Energy Step Code?	No but preparing to do so

P5 2018 ENERGY GENERATION ACTIONS

Energy Generation Actions

A transition to renewable or low-emission energy sources for heating, cooling and power supports large, long-term GHG emissions reductions. Renewable energy including waste heat recovery (e.g. from biogas and biomass), geo-exchange, micro hydroelectric, solar thermal and solar photovoltaic, heat pumps, tidal, wave, and wind energy can be implemented at different scales, e.g. in individual homes, or integrated across neighbourhoods through district energy or co-generation systems.

Q 24 + Q 25 Community-Wide Energy Generation Actions Taken in 2018 + Additional Actions	
Q 26 Community-Wide Energy Generation Actions Proposed for 2019	
Q 27 + Q 28 Corporate Energy Generation Actions Taken in 2018 + Additional Actions	
Q 29 Corporate Energy Generation Actions Proposed for 2019	
	Construction of a treatment facility to treat high strength waste and incorporating a biogas scrubbing system to use biogas to heat the building.

Energy Generation	
Q 30 Is your local government developing, or constructing a <ul style="list-style-type: none"> • district energy system • renewable energy system • none of the above 	No
Q 31 Is your local government operating a <ul style="list-style-type: none"> • district energy system • renewable energy system • none of the above 	Yes
Q 32 Is your local government connected to a district energy system that is operated by another energy provider?	No
Q 33 Are you familiar with the 2018 List of Funding Opportunities for Clean Energy Projects Led by First Nations and Local Governments?	Yes

2018 GREENSPACE/NATURAL RESOURCE PROTECTION ACTIONS

Greenspace Actions

Greenspace/Natural Resource Protection refers to the creation of parks and greenways, boulevards, community forests, urban agriculture, riparian areas, gardens, recreation/school sites, and other green spaces, such as remediated brownfield/contaminated sites as well as the protection of wetlands, waterways and other naturally occurring features.

Q 34 + Q 36 Community-Wide Greenspace Actions Taken in 2018 + Additional Actions (Q 35 below Q 41)	
	<i>Bike Skills Park:</i> Complete construction of a new bike skills park at Becker Park in the City Centre.
	<i>Lakeshore Park:</i> Construction of a new park on Vernon's waterfront.
	Continue to provide support for non-profit organizations and stewardship based projects relevant to greenspace/natural resources protection.
	Development of Lake Accesses
Q 37 Community-Wide Greenspace Actions Proposed for 2019	
	<i>New Landscape Standards Bylaw:</i> The City is reviewing the Landscape Standards Bylaw, which outlines the requirements for landscaping in multi-family, commercial, industrial and institutional development. The goal is to ensure the new development provides quality landscaping, not just for the aesthetic purposes, but also to provide shading for pedestrians and cyclists, reduce the urban heat island effect, provide cleaner air for the community and minimize wildfire risk.
	<i>Hurlburt Park:</i> Access and safety improvements to a new lakefront park.
	Update of the Polson Park Master Plan
	Development of plan for new park at previous Civic Arena Site
	Development of the Kin Race Track Comprehensive Development Plan – to consider recreation facilities, housing, employment and park space.
	Lake Access enhancement continues.

Greenspace	
Q 41 Does your local government have urban forest policies, plans or programs?	Yes
Q 35. Does your local government have policies, plans or programs to support local food production?	Yes

2018 SOLID WASTE ACTIONS

Solid Waste Actions

Reducing, reusing, recycling, recovering and managing the disposal of the residual solid waste minimizes environmental impacts and supports sustainable environmental management, greenhouse gas reductions, and improved air and water quality.

Q 42 + Q 43 Community-Wide Solid Waste Actions Taken in 2018 + Additional Actions	
	Initiate a pilot project for waste diversion through compost
	Supported and attended multiple community outreach events including the Seedy Saturday community seed exchange (in partnership with Vernon in Transition, and the Sustainable Environment Network Society) and the Community Garage Sale (in partnership with Kal Tire Corporate Social Responsibility).
Q 44 Community-Wide Solid Waste Actions Proposed for 2019	
	Waste diversion through organics compost waste diversion pilot project

Q 45 + Q 46 Corporate Solid Waste Actions Taken in 2018 + Additional Actions	
	Recreation Centre Purchase of recycle bin
Q 47 Corporate Solid Waste Actions Proposed for 2019	
	Participating in the Organics Diversion project in the municipal offices

Solid Waste	
Q 48 Does your local government have construction and demolition waste reduction policies, plans or programs?	No
Q 49 Does your local government have organics reduction/diversion policies, plans or programs?	Yes

2018 TRANSPORTATION ACTIONS

Transportation Actions

Transportation actions that increase transportation system efficiency emphasize the movement of people and goods, and give priority to more efficient modes, e.g. walking, cycling and public transit, can contribute to reductions in GHG emissions and more livable communities.

Q 50 + Q 51 Community-Wide Transportation Actions Taken in 2018 + Additional Actions	
	Worked with BC Transit to implement a transit service expansion, which included 7,000 additional annual service hours starting April 1, 2018. The transit service expansion included changes to existing Routes 2 and 3, and minor changes to Routes 7 and 8. A brand new higher frequency Route 9 was also introduced (15 minute frequency during peak periods and 30 minute frequency off-peak).
	Adopted traffic bylaw provisions that allows wheeled transport users (e.g. skateboarders, longboarders, non-motorized scooters, children on bicycles, etc.) to legally use pedestrian and bicycle facilities throughout Vernon. This coincided with a public education campaign to promote awareness along with proper etiquette and safety between all users.
	Provided community events, incentives, and outreach programs to encourage modal shift from personal vehicles to active transportation modes. Initiatives included Bike to Work and School Week, Commuter Challenge, and International Walk and Wheel to School Month.
	Introduced 'Class Rides Free' program for schools to take free public transit field trips for the purpose of travel training and 'Kids Ride Free' program that allows children twelve and under to ride Vernon Regional Transit for free when accompanied by a fare paying adult.
	Provided cost-share bicycle rack program for businesses to procure low-cost bike racks to be installed on provide property.
	<p>Constructed various infrastructure projects in line with the City's Master Transportation Plan that encourage alternative transportation modes, including:</p> <ul style="list-style-type: none"> • Constructed a 630m sidewalk in 24th Avenue (39th Street to 43rd Street). • Constructed 230 m of the 29th/30th Street Transportation and Utility Corridor project (34th Avenue to 37th Avenue) of the north-south pedestrian/cycling/transit corridor (ultimately the corridor will be 2.6km long connecting Polson Park to Village Green Centre). This section includes a two-way cycle track, separated by a buffer from the sidewalk. • Constructed 300 m of the 35th Avenue multi-use path (27th Street to 30th Street). This segment was constructed in coordination with the 29th/30th Street Transportation and Utility Corridor project as the two projects intersect. The project included signalization of the 30th Street and 35th Avenue intersection in anticipation of the future traffic growth and active transportation safety (once the 29th/30th Street north-south corridor is connected, there is expected to be additional traffic). • Constructed about 110 metres of 29th Avenue, between 31st Street and 32nd Street, which included improved pedestrian infrastructure through widening sidewalks. • Completed the final phase of the Kalamalka Lake Road project, from Browne Road to the City boundary. The project included a 4m wide multi-use path on the west side of Kalamalka Lake Road, and provides an active transportation connection to the Okanagan Rail Trail.

	Granted parking variances for various developments with requirements from developers to implement Transportation Demand Management (TDM) initiatives to offset parking demand. TDM initiatives included: car sharing vehicles, additional bike parking, bike repair stations, and transit shelters.
	Constructed 230 m of the 29th/30th Street Transportation and Utility Corridor project (34th Avenue to 37th Avenue) of the north-south pedestrian/cycling/transit corridor that will ultimately be 2.6km long, connecting Polson Park to Village Green Centre. This section included a two-way cycle track, separated by a buffer from the sidewalk. One segment will be a multi-use path, where the project intersects with 35th Avenue. The project includes a landscaped boulevard.
	Constructed 110 metres of 29th Avenue, between 31st Street and 32nd Street. This project included improved pedestrian infrastructure through widening sidewalks. The project included a landscaped boulevard.
Q 52 Community-Wide Transportation Actions Proposed for 2019	
	Design and construct a variety of sidewalks identified by the community as high priority projects through the Pedestrian and Bike Master Plan public participation. These connections will provide greater pedestrian connectivity in the city where there are currently gaps.
	Final design and construction of ten sidewalk ramps in the Primary Business Improvement Area within Vernon's downtown. These ramps would follow accessible design best practices with due consideration of on-site constraints (i.e. available land).
	Continue providing community events, incentives, and outreach programs to encourage modal shift from personal vehicles to active transportation modes. Initiatives would again include Bike to Work and School Week, Commuter Challenge, and International Walk and Wheel to School Month.
	Continue 'Class Rides Free' program for schools to take free public transit field trips for the purpose of travel training and 'Kids Ride Free' program that allows children twelve and under to ride Vernon Regional Transit for free when accompanied by a fare paying adult.
	Continue to provide cost-share bicycle rack program for businesses to procure low-cost bike racks to install on private property.
	Implement a system-wide signage upgrade to Vernon Regional Transit to improve visibility and awareness of the transit system while providing more information to riders.
	Conversion of a single on-street metered parking space to 12 bicycle parking spaces at the northeast corner of 30 th Street and 30 th Avenue.
	Installation of additional bike parking within the City's downtown core where bike parking is currently insufficient. The initiative would make cycling to the downtown more attractive and convenient.
	Construct various infrastructure projects in line with the City's Master Transportation Plan that encourage alternative transportation modes, including: <ul style="list-style-type: none"> • 48th Avenue Road Improvement and Utility Reconstruction (29th Street to Highway 97) that will add a 480 m long multi-use pathway on the north side. This pathway would connect active transportation from the 29th/30th Street active transportation corridor to the Anderson Way subdivision. • The last segment of the 29th/30th Street Transportation and Utility Corridor project (37th Avenue to 41st Avenue). This section includes a multi-use pathway on the east side. This project would be an important milestone as it would finalize a key 2.6 km north/south arterial route for active transportation from Polson Park, through the downtown, to the Village Green Centre. This final connection would also allow for a more direct core transit network route between North Vernon and downtown.

	<ul style="list-style-type: none"> • Reconstruction of 250 m of 28th Avenue (30th Street to 32nd Street) and Coldstream Avenue (28th Avenue to 32nd Street). This project will include improved pedestrian infrastructure through widening sidewalks and will improve transportation safety at the east Coldstream and Highway 97 intersection. • Provide a protected multi-use pathway on one side of 15th Street, between Kosmina Drive and Pottery Road. This connection would include a widened shoulder with concrete barriers providing separation to encourage active transportation use. • Improve 440 m of the Polson Park Multi-Use Pathway between Polson Park and the Kalamalka Lake Road Multi-Use Pathway to improve cycling access. The project would include improved letdowns, bollards, path structure, asphalt, lighting, pavement markings, and signage. This project would provide an improved connection from North Vernon to the Okanagan Rail Trail.
	Implement a new policy that would provide Transportation Demand Management alternatives for developments to offset off-street parking reductions in private property.
	Revise the City's Zoning Bylaw #5000 to reduce off-street parking requirements for multi-family developments within the downtown core, which would reduce space allocated to vehicles and create more liveable space for residents.
	Construct about 150 metres of 28th Avenue and Coldstream Avenue, between 31st Street and 32nd Street. This project will include improved pedestrian infrastructure through widening sidewalks and will improve transportation safety at the east Coldstream and Highway 97 intersection. The project includes a landscaped boulevard. The project was tendered in 2018 but will be constructed in 2019 due to availability of contractors.

Q 53 + Q 54 Corporate Transportation Actions Taken in 2018 + Additional Actions	
	Provided increased bike parking for staff, which includes additional space for large bicycle accessories (e.g. bike trailers).
	The Fleet replacement strategy continues to replace older technology vehicles and equipment with newer stricter emission technology.
	1.) Replaced one 2001 skid steer loader with one 2018 skid steer loader EPA Tier 4
	2.) Replaced one 1999 Ford E350 with one 2017 GMC Savana US EPA class HDV/ Tier3
	3.) Replaced One 1981 Kubota Diesel Tractor Tier 0 emission with a fully Electric Zero Emission Polaris UTV model R18MAE4G8
	4.) Replaced one 2003 John Deere 1600 EPA Tier 1 mower with a new 2018 Toro mower with EPA Tier 4 emission
	5.) Replaced one 1999 Ford F150 with one 2019 Ford F250 US EPA: T3B200 HDV CA OBD2 compliant
	6.) Replaced one 2004 GMC c 1500 with a 2018 Ford f150 US EPA: T3B70 LDT3 CA OBD2 compliant
	7.) Replaced two full size 2005 Dodge W2500 pickups with two compact Chevrolet Colorado US EPA LDT / Tier 3 compliant pickups
	8.) Removed from service one 2002 Ford F250 replaced with 2016 Ford f350 US EPA; 1T3B570 HDV FED OBD2
	9.) Start upgrade of GPS system for improved route planning and vehicle monitoring
Q 55 Corporate Transportation - Actions Proposed for 2019	
	Implementation of an electric bicycle fleet for City employee business use. Proposed of 5 bicycles to start. Equalling reduced vehicle usage.

	Additional Electric vehicles to be acquired to replace internal combustion vehicles. Lowering GHG Emissions.
	Completion of the upgrade to the vehicle GPS system will yield lower vehicle idle times, opportunities for better route planning and improved vehicle usage.
	Continue to upgrade vehicles to newer vehicles with improved fuel economy and stricter emission standards. Eight units (vehicles and equipment) are scheduled for replacement.
	The Fleet Manager will be attending the “Drive to Zero Event” Vancouver Convention Center May 28, 2019.
	Continue to look into alternate fuel or power source opportunities in vehicle replacements and additions.

Transportation	
Q 56 Does your local government have policies, plans or programs to support: <ul style="list-style-type: none"> • Walking • Cycling • Transit Use • Electric Vehicle Use • Other (please specify) - new traffic bylaw update allows small wheeled transport (e.g. skateboards, foot-operated scooters, and children under 13 riding bicycles) to use both pedestrian and cyclist facilities. 	Yes Yes Yes Yes Yes Yes
Q 57 Does your local government have a Transportation Demand Management (TDM) strategy (e.g. to reduce single-vehicle occupancy trips, increase travel options, provide incentives to encourage individuals to modify travel behaviour)?	Yes
Q 58 Does your local government integrate its transportation and land use planning?	Yes

2018 WATER AND WASTEWATER ACTIONS

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.

Q 59 + Q 60 Community-Wide Water and Wastewater Actions Taken in 2018 + Additional Actions	
	The City of Vernon received grant from the Clean Water and Wastewater Fund (CWWF) to proceed with 3,800 m of sanitary sewer main extension to directly service 100 residents and ultimately enables 900 homes to connect to the utility. About 1000m of pipe was constructed in 2017 and the remaining 2800m was completed in 2018.
	The City is committed to water quality protection and conservation and engaged the community through: <ul style="list-style-type: none"> • Outreach and educational opportunities in regards to understanding stormwater functions and actions for mitigating and protecting water quality such as best practices

	<p>for land owners on private property, including supporting the Okanagan Collaborative Conservation Program in the Foreshore Inventory Update Report of Okanagan Lake;</p> <ul style="list-style-type: none"> • Support the stewardship opportunities for water quality protection and conservation such as the Yellow Fish Road storm drain painting program; and • Provide outreach opportunities to riparian land owners, especially via the development community to learn about the impact and responsibilities of living and working within riparian and lakeshore areas in partnership with the OCCP.
Q 61 Community-Wide Water and Wastewater Actions Proposed for 2019	
	Continue to collaborate with government partners and various community stewardship groups to support water quality protection and conservation.

Q 62 + Q 63 Corporate Water and Wastewater Actions Taken in 2018 + Additional Actions	
	Install Elkay Water Cooler In Priest Valley and Kal tire Arena
Q 64 Corporate Water and Wastewater Actions Proposed for 2019	

Water Conservation	
Q 65 Does your local government have water conservation policies, plans or programs?	Yes

2018 CLIMATE CHANGE ADAPTATION ACTIONS

This section of the CARIP survey is designed to collect information related to the types of climate impacts local governments are experiencing and how they are being addressed.

Q 66 Please identify the THREE climate impacts that are most relevant to your Local Government.	
<ul style="list-style-type: none"> • Warmer winter temperatures reducing snowpack • Changes to temperature and precipitation causing seasonal drought • Heatwaves impacting population health • Increased temperatures increasing wildfire activity • Increased temperatures affecting air quality • Changing temperatures influencing species migration and ecosystem shifts • Changing temperatures influencing ecosystem shifts • Extreme weather events contributing to urban and overland flooding • Sea level rise and storms causing coastal flooding and/or erosion 	
Other (please specify):	
Q 67 In 2018 has your local government addressed the impacts of a changing climate using any of the following?	
Risk and Vulnerability Assessments	Yes
Risk Reduction Strategies	Yes
Emergency Response Planning	Yes

Asset Management	Yes
Natural/Eco Asset Management Strategies	Yes
Infrastructure Upgrades (e.g. stormwater system upgrades)	Yes
Beach Nourishment Projects	Yes
Economic Diversification Initiatives	Yes
Strategic and Financial Planning	Yes
Cross-Department Working Groups	yes
Official Community Plan Policy Changes	Yes
Changes to Zoning and other Bylaws and Regulations	Yes
Incentives for Property Owners (e.g. reducing storm water run-off)	No
Public Education and Awareness	Yes
Research	Yes
Mapping	Yes
Partnerships	Yes
Other (please specify):	

Q 68 Climate Change Adaptation Actions Taken in 2018	
Please elaborate on key actions and/or partnerships your local government has engaged in to prepare for, and adapt to a changing climate. Add links to key documents and information where appropriate.	
	In 2017 the City of Vernon received a Gas Tax Strategic Priorities fund grant for a Drainage Infrastructure Prioritization study that will prioritize drainage infrastructure replacement and improvements through asset management analysis. This study will also integrate new change climate data into the analysis to define overland flow routes through the City. Work started in 2018 and will be completed in 2019.
	The City partnered with Okanagan Basin Water Board, GEOBC and the other municipalities in the Okanagan for the acquisition of Lidar mapping to support future drainage and flood mapping work and this information has now been received.
Q 69 Climate Change Adaptation Actions Proposed for 2019	
	Flood Plain risk assessment, mapping and mitigation work is planned for 2019 for the Upper BX Creek. This work will incorporate climate change into the modelling portion of the work and aim to quantify risk to public and private assets adjacent to BX Creek.
	The City of Vernon is undertaking a comprehensive Climate Action Plan process that involves a risk and vulnerability assessment as well as adaptation plan.
Q 70 For more information please contact	

Q 71. The following are key resources that may be helpful to your local government in identifying climate impacts, as well as, strategies, actions and funding to deal with them. For those resources that you have used, please indicate whether they were useful in advancing your work in climate change adaptation?	
Indicators of Climate Change for British Columbia Plan2Adapt Climate Projections for Metro Vancouver Climate Projections for the Capital Region Climate Projections for the Cowichan Valley Regional District Province of BC's BC Adapts Video Series Preparing for Climate Change: Implementation Guide for Local Governments Public Infrastructure and Engineering Vulnerability Committee's (PIEVC) Sea Level Rise Adaptation Primer BC Regional Adaptation Collaborative Webinars Retooling for Climate Change Water Balance Model Water Conservation Calculator Funding: National Disaster Mitigation Program (NDMP) Community Emergency Preparedness Fund (CEPF) Municipalities for Climate Innovation Program (MCIP) Climate Adaptation Partner Grants (FCM) Infrastructure Planning Grants (MAH) Federal Gas Tax Fund	Haven't Used Haven't Used Useful - Reference Useful - Reference Useful - Reference Haven't Used Useful Useful Not Useful – Not Applicable Haven't Used Useful Haven't Used Haven't Used Useful Useful Haven't Used Useful Useful Useful
Other (please specify) Building Climate Resilience in the Okanagan – A Homeowner's Resource Guide. Published by the South Okanagan Real Estate Board, 2019	Useful

2018 OTHER CLIMATE ACTIONS

Other Climate Actions

This section provides local governments the opportunity to report other climate actions that are not captured in the categories above.

Q 72 Community-Wide Other Actions Taken in 2018	
	<p>Energy Conservation and GHGe Reduction:</p> <ul style="list-style-type: none"> • Continue the Tree Education and Outreach Program to encourage urban canopy growth which provides shade, decreases cooling costs, and lowers GHG emissions.; • Engage businesses on energy conservation practices and incentives with partners; • Provide opportunities for the local development community to learn about ways to enhance energy efficiency in collaboration with partners; and • Support educational opportunities for youth and students through the Planet Protectors program. This engagement program is a digitally-delivered, BC curriculum-linked educational resource that focuses on climate change, energy and transportation and is proven to drive measureable behaviour change at home and help communities meet their climate action goals.

	The City initiated the Sustainability Grants program for 2017-2018. The program aims to revitalize the Sustainability Awards program by providing small grants of between \$500 to \$1,000 as an incentive to leverage and accelerate sustainability projects led by Vernon residents, not for profits and community groups. Examples of such projects could include establishing a neighbourhood community garden, building educational or demonstration displays for conservation by students or youth groups, or undertaking energy and GHGe reduction projects. Multiple applications were received and the proposed projects will take place during 2018.
	Continue to collaborate with government partners and various community stewardship groups to support water quality protection and conservation.
Q 73 Corporate Other Actions Taken in 2018	
	Continue with the implementation of the Vernon Sustainability Grants program.
	Established a Climate Action Advisory Committee composed of youth, industry specialists and the community at large to explore ways to further reduce emissions and to adapt to the impacts of climate change.
	<p><i>Carbon Tax Revolving Fund:</i></p> <p>Implement the Carbon Tax Revolving Fund that provides a sustainable source of funding for climate action projects that can demonstrate corporate or community greenhouse gas emissions reduction. The policy would guide the use of the City's carbon tax reserve funds to provide direct benefits to Vernon through GHG emissions reduction, taxpayer cost savings and reinvestment in the reserve fund for further emissions reduction through a revolving fund structure.</p> <p>Management of the carbon tax reserve fund as a revolving fund supports projects that provide measurable savings, generate additional emissions reduction opportunities, and engage corporate and community members with tangible financial incentives. The fund provides benefits beyond one time investments, enhancing the City's leadership in sustainability and directly providing taxpayer savings through climate action initiatives.</p>
	Continue to collaborate with government partners and various community stewardship groups to support water quality protection and conservation.

Other	
Q 74 Are you familiar with the Community Lifecycle Infrastructure Costing Tool (CLIC) ?	Yes
Q 75 Is your local government using the CLIC tool?	No

INNOVATION AND PEER-TO-PEER LEARNING

Innovation

This section provides the opportunity to showcase an innovative *Corporate and/or Community-Wide* GHG reduction and/or climate change adaptation activity that your local government has undertaken and that has had, or has the potential to have, a significant impact. You are welcome to highlight an action that has already been listed.

Projects included here may be featured as success stories on the [B.C. Climate Action Toolkit](#) and/or shared with other local governments to inspire further climate action. Please add links to additional information where possible.

Communities that have conducted innovative initiatives may want to consider making applications to [CEA's Climate and Energy Action Awards](#), [FCM Sustainable Communities Awards](#) or to [FCM's National Measures Report](#).

Q 76 Community-Wide Innovation Action
Traffic Bylaw #5600 – allowing small wheeled transport in the City to use cyclist and pedestrian facilities, while many other communities simply don't permit them anywhere.
Q 77 Corporate Innovation Action
Introducing an E-bike Fleet for staff.
Q 78 For more information on actions described above contact
Traffic Bylaw #5600 – contact Ellen Croy, 250-550-3676 E-bike Fleet – contact Angela Broadbent, 250-550-7831 / Laurie Cordell, 250-550-3247

Programs, Partnerships and Funding Opportunities

Local governments often rely on programs, partnerships and funding opportunities to achieve their climate action goals. Please share the names of programs and organizations that have supported your local government's climate actions by listing each entry in the box below separated by a forward slash (e.g. program1/program2).

Mitigation

Q 79 Mitigation Programs, Partnerships and Funding
Partnerships have become both effective and necessary in being able to deliver the level of outreach and educational opportunities the City has provided in its sustainability program. From working with the local business community, to local stewardship groups, to regional non-profit collaboratives and boards related to sustainability.
Climate Action Advisory Committee – brings together community partners to support the City with the development of the Climate Action Plan.
ICBC Road Improvement Program / BikeBC Program

The Sustainability Grants program provides small grants of between \$500 to \$1,000 as an incentive to leverage and accelerate community sustainability projects, including those that would benefit climate change mitigation and adaptation, led by Vernon residents, not for profits and community groups.

Adaptation

Q 80 Adaptation Programs, Partnerships and Funding

2018 CARBON NEUTRAL REPORTING

Local governments are required to report on their progress in achieving their carbon neutral goal under the [B.C. Climate Action Charter](#). Working with B.C. local governments, the joint Provincial-UBCM Green Communities Committee (GCC) has established a common approach to determining carbon neutrality for the purposes of the Climate Action Charter, including a Carbon Neutral Framework and supporting guidance for local governments on how to become carbon neutral.

Prior to completing this portion of the survey, please ensure that you are familiar with guidance available on the [B.C. Climate Action Toolkit website](#), especially the [Workbook](#) and [Becoming Carbon Neutral: A Guide for Local Governments in British Columbia](#).

Please note: As a result of the BC Recycling Regulation, local governments are no longer required to account for GHG emissions from vehicles, equipment and machinery required for the collection, transportation and diversion of packaging and printed paper, in their annual Climate Action Revenue Incentive Program (CARIP) reports.

Reporting Emissions

Q 81 Did your local government measure corporate GHG emissions for 2018?	Yes
Q 82 If your local government measured 2018 corporate GHG emissions, please report the number of corporate GHG emissions from services delivered directly by your local government (in tonnes of carbon dioxide equivalent)	3,327 tCO ₂ e
Q 83 If your local government measured 2018 corporate GHG emissions, please report the number of corporate GHG emissions from contracted services (in tonnes of carbon dioxide equivalent)	312 tCO ₂ e
Q 84 TOTAL A: CORPORATE GHG EMISSIONS FOR 2018 (Direct GHGs + Contracted GHGs)	3,639 tCO ₂ e

Reporting Reductions and Offsets

To be carbon neutral, a local government must balance their TOTAL corporate GHG emissions generated in 2018 by one or a combination of the following actions:

- undertake GCC-supported Option 1 Project(s)
- undertake GCC-supported Option 2 Project(s)
- purchase carbon offsets from a credible offset provider

For more information about options to balance or offset corporate GHG emissions please refer to [Becoming Carbon Neutral: A Guidebook for Local Governments in British Columbia](#).

Carbon Neutral Reporting	
Q 99 Does your local government set aside funds in a climate reserve fund or similar?	Yes

GCC CLIMATE ACTION RECOGNITION PROGRAM

Green Communities Committee Climate Action Recognition Program

The joint Provincial-UBCM Green Communities Committee (GCC) is pleased to be continuing the Climate Action Recognition Program again this year. This multi-level program provides the GCC with an opportunity to review and publicly recognize the progress and achievements of each Climate Action Charter (Charter) signatory.

Recognition is provided on an annual basis to local governments who demonstrate progress on their Charter commitments, according to the following:

Level 1 – Demonstrating Progress on Charter Commitments: For local governments who demonstrate progress on fulfilling one or more of their Charter commitments.

Level 2 – Measuring GHG Emissions: For local governments that achieve Level 1, and who have measured their Corporate GHG Emissions for the reporting year and demonstrate that they are familiar with their community's energy and emissions inventory (i.e. CEEI)

Level 3 – Accelerating Progress on Charter Commitments: For those local governments who have achieved Level 1 and 2 and have demonstrated undertaking significant action (corporately or community wide) to reduce GHG emissions in the reporting year (e.g. through undertaking a GHG reduction project, purchasing offsets, establishing a reserve fund).

Level 4 - Achievement of Carbon Neutrality: For local governments who achieve carbon neutrality in the reporting year.

Q 100 Based on your local government's 2018 CARIP Climate Action/Carbon Neutral Progress Survey, please check the GCC Climate Action Recognition Program level that best applies:

<input type="checkbox"/>	Level 1 – Demonstrating Progress on Charter Commitments	
<input type="checkbox"/>	Level 2 – Measuring GHG Emissions	
<input type="checkbox"/>	Level 3 – Accelerating Progress on Charter Commitments	✓
<input type="checkbox"/>	Level 4 - Achievement of Carbon Neutrality	
<input type="checkbox"/>	Not Sure	

Q 101 Related to Level 3 recognition, if applicable, please identify any new or ongoing corporate or community wide GHG reduction projects (other than an Option 1 or Option 2 project) undertaken by your local government that reflects a significant investment of time and/or financial resources and is intended to result in significant GHG reductions:

PROJECT NAME:
Development of the Climate Action Plan