

Local Government Climate Action Program Survey Submission Report

Surrey

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Question	Answer
1. Does your local government or Modern Treaty Nation have a climate action plan or strategy?	Yes
1.a. Indicate the date the plan was adopted.	A Community Energy and Emissions Plan (CEEP) was adopted in 2013. An updated Climate Crisis Action Strategy is in development, targeting Council approval in the coming months.
1.b. Include a link to the document (URL) or webpage.	www.surrey.ca/climateaction
2. For the calendar year 2021, did your local government or Modern Treaty Nation measure and publicly disclose corporate greenhouse gas (GHG) emissions?	Yes
2.a. Include a link to the document (URL) or webpage where it is disclosed.	https://surrey.maps.arcgis.com/apps/MapJournal/index.html? appid=37ad10f2a0574aaf94544d347c591dda
2.b. Report emissions based on Services Delivered Directly (in tCO2e).	10937

2.c. Report emissions based on Contracted Services (in tCO2e).	6558
2.d. Report emissions based on Total Corporate Emissions (in tCO2e).	17495
3. For calendar year 2021, did your local government or Modern Treaty Nation measure and publicly disclose a community- wide emissions inventory?	No, community GHG emissions are not measured, but an inventory is in development and will be complete in the next year
4. Is your local government or Modern Treaty Nation tracking progress on its community-wide GHG reduction target?	Yes
4.a. Please provide your reduction target(s).	Net Zero Emissions
4.b. Please provide the target year.	2050
4.c. Please provide the baseline year.	2010
4.d. Please provide the link(s) to the document(s) or website if available.	https://www.surrey.ca/sites/default/files/corporate-reports/CR_2020 -R048.pdf

5. Describe up to four climate intiatives, and their outcomes, your local government or Modern Treaty Nation is currently undertaking for Buildings	1) Energy Step Code (www.surrey.ca/stepcode) >>The City of Surrey adopted the BC Energy Step Code in 2018; currently, Part 9 residential buildings are required to meet Step 3. Part 3 residential buildings are also required to meet Step 3, or Step 2 with a Low Carbon Energy System. Part 3 commercial (Group D and E) buildings are required to meet Step 2. The City is currently preparing to update the Step Code policy for higher energy performance, and to implement stronger policies for reducing carbon pollution in line with the City's climate targets and the pending Climate Crisis Action Strategy.
	2) Zero Carbon Incentive >>In 2021, the City adopted a Zero Carbon Incentive policy within Neighbourhood Concept Plans, providing additional density allowances to encourage building electrification to meet the City's climate targets. The policy was introduced in the Darts Hill and Semiahmoo Neighbourhood Concept Plans, and is proposed for the Fleetwood Town Centre plan update; expansion of the policy is under consideration. Modern electric appliances are highly efficient and cost effective, and avoid both GHG emissions and indoor air pollution associated with gas combustion. Furthermore, heat pump systems provide both heating and cooling.
	 3) Civic Building Projects >Surrey Arts Centre - Heat Pump Project: The Surrey Arts Centre facility operated and maintained by the City is in the process of retrofitting the air handling unit system with a heat pump system. The retrofit is proposed to reduce natural gas consumption at the site by 28%. The City is exploring heat pump options for other city facilities as well. >Chuck Bailey Recreation Centre Expansion - the City expanding this facility, located in City Centre, to meet the current and future needs of this growing neighbourhood and surrounding Whalley Town Centre. The project is in the design phase and is targeting a zero-carbon operational (all-electric) system for heating and cooling, and exploring measures to reduce embodied carbon (lifecycle emissions of materials).

6. Describe up to four climate	1) Updated Surrey Transportation Plan (STP)
intiatives, and their outcomes,	(http://www.surrey.ca/transportationplan), integrated with Climate
your local government or Modern	Crisis Action Strategy (CCAS) (http://www.surrey.ca/climateaction)
Treaty Nation is currently	>>In early 2020, the City began to create a new Surrey Transportation
undertaking for Transportation	Plan (STP), which has developed the following Vision: "Connecting a
	million people and places with safe, inclusive, convenient and green
	transportation choices for all". Various technical tasks and community
	engagement activities were carried out in 2021 and 2022. When
	complete, the STP will include targets for 2050 and 2030 that align
	with provincial targets, and specific Action Plans to meet the 2030
	targets. The plan will deliver on four Bold Moves: Put Safety First,
	Support 15-Mintue Neighbourhoods; Connect Communities with
	Rapid Transit; Invest in Green Transportation Choices. The Draft
	Climate Crisis Action Strategy (CCAS) includes "Safe Zero-Carbon
	Transportation" as one of six key components of the strategy; to
	include actions, measures and targets for mode shift and vehicle
	electrification. These two plans are being developed in close
	collaboration and with a strong focus on land use planning and mode
	shift to walking/cycling/transit. CCAS and STP targets are aligned with
	CleanBC 2030 Roadmap targets. The STP is expected to be completed
	and adopted by Council in early 2023.
	2) Protected Cycling Quick-Build Projects
	(https://www.surrey.ca/renovating-building-
	development/engineering-infrastructure/capital-construction-
	program/highlighted-construction-projects/protected-cycling-
	network)
	>>In 2021 the City built 6km of protected cycling paths using "quick-
	build" materials. This is part of a five-year strategy to build 11km of
	protected cycling routes as part of various major Capital Projects in
	City Centre. They will be built through a combination of road widening
	projects and cycling-specific projects outlined in Surrey's 10 Year
	(2021-2030) Servicing Plan.
	3) Electric Vehicle Strategy and charging network
	(https://www.surrey.ca/services-payments/parking-streets-
	transportation/electric-vehicles/electric-vehicle-strategy)
	>> In 2021, Surrey City Council adopted an Electric Vehicle Strategy.
	The actions are organized into 5 areas of focus: Support Home &
	Workplace Charging; Expand Access to Public Charging; Accelerate
	Individual EV Adoption; Accelerate Fleet EV Adoption; Lead by
	Example. The City is continuing to manage and build new public EV
	charging stations, and has bylaw requirements for EV charging in new
	development. EV charging is provided in City Hall for staff and visitors.
	10 vehicles in the City fleet are electric.
	4) Renewable Natural Gas (RNG) Use in City Fleet
	City fleet in 2021 used RNG to fuel both waste hauling trucks and light
	and medium duty fleet vehicles. This led to significant GHG emissions
	reduction for the 2021 corporate inventory.

7. Describe up to four climate intiatives, and their outcomes, your local government or Modern Treaty Nation is currently undertaking for Community1) Surrey City Energy – renewable energy system (https://www.surrey.ca/about-surrey/sustainability-energy- services/surrey-city-energy/district-energy-strategy) >> The City is planning a new sewer heat recovery system for Surrey City Energy, the City-owned district energy system in Surrey City Centre. The system will tap in to waste heat in the regional sewer system to supply up to 70% of the total system's heating requirements, and reduce GHG emissions by up to 15,000 tonnes pro-
 year. In 2021, the project entered the pre-design phase, with construction scheduled to begin in 2022/2023, and the system is expected to come online in 2025-2026. 2) The City is developing a Zero Waste and Circulate Economy Strate in an attempt to become Canada's first zero waste to landfill community in Canada https://www.surrey.ca/services-payments/waste-collection/zero-waste-strategy. Public engagemen was undertaken in 2021, and the final strategy is anticipated to be advanced to Council in 2022. 3) Land Use Planning - https://www.surrey.ca/renovating-building-development/land-planning-development/land-use-planning Land use planning in 2021 included advancing several plans with significant provisions for emissions reduction through compact, complete communities, zero-carbon buildings, biodiversity and greenspace, and electric vehicle charging. Two new plans were approved - Darts Hill Neighbourhood Concept Plan (NCP), and Semiahmoo Town Centre Plan - and several are in progress, includir Surrey City Centre Plan Update, Fleetwood Plan, Clayton Corridor Plan, Guildford Plan, Newton-King George Boulevard Plan.
 8. Describe up to four climate intiatives, and their outcomes, your local government or Modern Treaty Nation is currently undertaking for Climate Resilience 1) Mud Bay Foreshore Enhancements (https://www.surrey.ca/services-payments/water-drainage- sewer/flood-control-and-prevention/coastal-flood-adaptation- projects/mud-bay) > Surrey is piloting an innovative method to increase its ability to manage coastal flooding, while enhancing the coastal habitats and helping them adapt to sea level rise. This nature-based solution is based on the concept of a "living dyke" - building a gentle slope on foreshore with native marsh species to gradually increase the elevation over time and ensure the resilience of coastal marsh ecosystems in changing environmental conditions. This project is
being implemented in a collaborative way with many partners, coordinated primarily through the Boundary Bay Living Dyke Roundtable (with representatives from Indigenous nations, environmental regulators, coastal engineering experts and researchers). Through shared learning and enhanced monitoring, th project will increase our understanding of viable low-impact coastal adaptation approaches and their replicability. [This initiative suppor objectives under Pathway 1, 2, 3 and 4 of the draft CPAS.] 2) Urban Heat Ready (https://www.surrey.ca/about- surrey/sustainability-energy-services/urban-heat-ready) Page 5 of 12

> Urban Heat Ready is a two-year project initiated in 2020 that brings together residents, community partners, development professionals and City staff to collaborate and co-create solutions to minimize urban heat impacts in Surrey City Centre. Through this project, Surrey has increased its understanding of community cooling needs, cooling best practices and adaptation scenarios (including green infrastructure and nature-based solutions), and community support for various solutions. Equity is a core value of the project inclusive engagement methods were used to ensure that the voices of equity-seeking groups and individuals most at risk from heat impacts were heard. In 2022 the project will wrap up its final phases, where lessons learned from the 2021 heat dome event will be integrated, alignment with internal initiatives is being explored, and one priority intervention is being identified for future advancement. [This initiative supports objectives under Pathway 1, 2, 3 and 4 of the draft CPAS.]

3) Funding for Biodiversity via DCCs

> In 2021, Council approved a unique new development cost charge (DCC) structure to increase funding of the Parkland Acquisition Program to provide additional funding for the acquisition of Green Infrastructure Network (GIN) lands outside the Agricultural Land Reserve, to support the City's Biodiversity Conservation Strategy (BCS), with an estimated value of \$820 million in 2020 dollars. https://www.surrey.ca/sites/default/files/corporatereports/CR_2021-R041.pdf

>>Endorsed by Council in 2014, the BCS primarily aims to protect the most critical habitat across the City. These critical lands are identified in the BCS as the Green Infrastructure Network ("GIN"), which is a series of hubs and corridors that link important green spaces together. The GIN allows for not only the protection of large hubs for wildlife, but also the important connections between hubs to ensure species diversity and connectivity throughout the City.

>>The BCS was adopted directly in response to rapid growth in Surrey. The BCS provides a long-term strategy and plan to ensure that the City can maintain and protect its most important natural assets in the face of rapid development and growth. The BCS also supports and builds on existing City policies, including the Official Community Plan, Sustainability Charter, Climate Adaptation Strategy, and Parks, Recreation and Culture Strategic Plan.

4) Urban Forest Management Strategy

https://engage.surrey.ca/urban-forest-management-strategy > In 2021 technical work and public engagement was carried out to shape Surrey's Urban Forest Management Strategy (UFMS), to provide clear direction for the future management of our urban forest.

 10. What actions has your local government or Modern Treaty Nation taken to increase to increase to increase and compactness since 2020 (e.g. urban containment boundary, carriage housing options)? 1) Approval of Several Land Use Plans: >> Since early 2020, the City has approved several Secondary land use plans, which help support the City's Smart Growth Principles (https://www.surrey.cd/renovating-building-development/land-planning-development/smart-development-principles) of: Aligning development with essential infrastructure, Offening a range of housing increasing density by allowing secondary suites and laneway or carriage housing options)? Expanding transit-oriented development, Preserving sensitive ecosystems, and responding to housing and business demands. These plans include: Redwood Heights Neighbourhood Concept Plan ("NCP") in N49 2020; Newton Town Centre Plan ("TCP") in July 2020; Darts Hill NCP (May 2021); and Semiahmoo TCP (January 2022). 2) Ongoing Land Use Plans: >> Several Land use plan processes where also initiated and are currently underway to support strategic City building projects, including the Surrey-Langley SkyTrain ("SLS") extension, RapidBus service expansion, and the continued growth of Surrey City Centre. These processes also serve to increase the development capacity and opportunity for employment, housing, and institutional uses, and include: Surrey City Centre Plan Update, Fleetwood Plan, Clayton Corridor Plan, Guildford Plan, Newton-King George Boulevard Plan, South Campbell Heights Plan. Of note, efforts are underway to establish Surrey City Centre as a major office and employment centre allowing residents to work closer to home and increasing the number of jobs accessible by transit. 3) New Density Bonus / Community Amenity Contribution Policy: >> In 2020, the City introduced the New Density Bonus Community Amenity-contributions Policy (https://www.surrey.ca/renovating-building-developmen	9. Which elements of your community's current official community plan (OCP) (or other relevant strategies, policies and/or plans) support the creation of more complete, compact communities?	 [https://www.surrey.ca/renovating-building-development/land-planning-development/land-use-planning/official-community-plan] 1) Vision (p.29-31): "The City of Surrey will continually become a greener, more complete, more compact and connected community that is resilient, safer, inclusive, healthier and more beautiful." 2) Land Use and Densities (p.33 - 59): Description of land use designations, and growth areas (maps). 3) Policies – Theme A – Growth Management – Objectives, Sections (p.64-75) 4) Policies – Theme B – Centres, Corridors and Neighbourhoods – Objectives, Sections (p.76-106)
& Police Facilities, Affordable Housing, Public Art, and	government or Modern Treaty Nation taken to increase community completeness and compactness since 2020 (e.g. urban containment boundary, increasing density by allowing secondary suites and laneway or	 Approval of Several Land Use Plans: >> Since early 2020, the City has approved several Secondary land use plans, which help support the City's Smart Growth Principles (https://www.surrey.ca/renovating-building-development/land-planning-development/smart-development-principles) of: Aligning development with essential infrastructure, Offering a range of housing choices, Creating compact, connected and walkable urban centres, Expanding transit-oriented development, Preserving sensitive ecosystems, and responding to housing and business demands. These plans include: Redwood Heights Neighbourhood Concept Plan ("NCP") in May 2020; Newton Town Centre Plan ("TCP") in July 2020; Darts Hill NCP (May 2021); and Semiahmoo TCP (January 2022). Ongoing Land Use Plans: >> Several Land use plan processes where also initiated and are currently underway to support strategic City building projects, including the Surrey-Langley SkyTrain ("SLS") extension, RapidBus service expansion, and the continued growth of Surrey City Centre. These processes also serve to increase the development capacity and opportunity for employment, housing, and institutional uses, and include: Surrey City Centre Plan Update, Fleetwood Plan, Clayton Corridor Plan, Guildford Plan, Newton-King George Boulevard Plan, South Campbell Heights Plan. Of note, efforts are underway to establish Surrey City Centre as a major office and employment centre allowing residents to work closer to home and increasing the number of jobs accessible by transit. New Density Bonus / Community Amenity Contribution Policy: >> In 2020, the City introduced the New Density Bonus Community Amenity contributions) for Plan and OCP Amendments. This new policy ensures developmer provide Community Amenity Contributions when City Council grants increased development rights through Zoning in the form of a Density Bonus. CACs help offset the impacts of growth and help fund new community facilities and services, such as: Parks, Lib

11. What data would be most valuable to your local government or Modern Treaty Nation in decision-making related to the creation of complete, compact communities?	 Trip Diary data on a much more frequent basis is needed for better informed transportation and land use planning to support mode shift and to meet climate targets and track progress and effectiveness of various walk/bike/transit investments. Odometer readings from ICBC to identify travel patterns at the neighbourhood scale. Personal/societal costs of commuting by mode [e.g. it costs \$X to an individual and \$Y to society to travel Zkm by car/bus/bike/walk, e.g. including ownership, capital, operating (equipment/infrastructure), healthcare] Locally relevant study/data clarifying the true costs of sprawl/greenfield vs. infill development, to more clearly articulate the importance of compact complete communities to the public, including costs to developer, City, society, etc. Economic/health/happiness benefits of living in a 15-minute neighbourhood (with locally applicable data) Equity metrics/mapping Climate risk and hazards – mapping, data, statistics, that could be incorporated in community plans. Incidence of climate related mortality/illness (e.g. at neighbourhood level) such as the heat dome, which could be used to support localized interventions such as increasing greenspace/trees, and building designs through community plans.
12. From 2021 to now, has your local government or Modern Treaty Nation taken any action(s) to address climate impacts?	 Climate Adaptation Policy Update 2021, as a part of the process of developing the Climate Crisis Action Strategy (CCAS), staff reviewed the status of the actions contained in the 2013 Climate Adaptation Strategy (CAS), as well as the latest research and data about our climate risks (including updated climate projections and risk ratings), best practices for adaptation, and current priorities of the City and senior governments. Many of the actions have been completed, some are now standard practice, while others are no longer relevant as practices have evolved. The remaining relevant actions, as well as new ones based on current opportunities, have been incorporated in the CCAS, which is being advanced for City Council approval in the coming months. Going forward, the CCAS will provide the single point of reference for tracking and reporting for both climate adaptation and mitigation. In 2013, the City developed and adopted a Climate Adaptation Strategy (CAS). The robust planning process to develop the CAS followed ICLEI's Building Adaptive and Resilient Communities (BARC) approach. BARC is a widely-recognized adaptation framework, based on a five-milestone approach: initiate, research, plan, implement and monitor/review. The CAS marked the completion of the first three milestones, and included 91 adaptation actions. Progress made on implementation and monitoring of the adaptation actions following the adoption of CAS, earned the City its fourth and fifth milestones of the BARC approach.
	 2. Disaster Mitigation and Adaptation Fund ("DMAF") program implementation With a Government of Canada investment of over \$76 million through Page 8 of 12

13. Has a climate risk and vulnerability assessment (or similar assessment) been undertaken for your local government or Modern Treaty	the Disaster Mitigation and Adaptation Fund (DMAF), Surrey is moving forward on its DMAF Project which consists of multiple distinct activities valued at \$187 million in total eligible expenses. Surrey's DMAF Project, initiated in 2016, is part of the first phase of its Coastal Flood Adaptation Strategy. It invests in the protection of neighbourhoods, businesses, agriculture, significant habitat areas and critical infrastructure by: establishing multiple lines of defense against coastal flooding; lowering nationally significant coastal and riverine flood and seismic vulnerabilities; and improving emergency response connectivity and disaster recovery time. By integrating climate- adaptive design and a life-cycle approach, these projects are crucial to achieving a future 200-year level of protection. In 2022, a new Climate Resiliency Planner was hired as a part of the Engineering Drainage Utilities division to assist engineering staff in the advancement and implementation of critical climate change resiliency projects associated with the DMAF Program. A number of projects are currently underway as a part of this program (https://www.surrey.ca/services-payments/water-drainage- sewer/flood-control-and-prevention/coastal-flood-adaptation- projects) In 2021-2022, these include: >>Nicomekl Riverfront Park - In 2021 the City awarded the contract for design services for phase one , and in 2022 public engagement Nicomekl Riverfront Park (https://engage.surrey.ca/nicomekl- riverfront-park) >>152 Street Road Upgrades for flood protection and multi-modal transportation (in design, scheduled to begin construction in 2022) >> Nicomekl River Bridge Replacement and Other Improvements for increased vehicle capacity, earthquake and flood resilience, and improved cycling and pedestrian facilities. (Under construction, scheduled for completion in 2022/2023). >>Crescent Beach storm and sanitary sewer upgrades and related works, to respond to and prepare for climate impacts such as rising groundwater levels and sea level rise (Phase
Nation?	Updated climate risk assessment will be included in CCAS pending
13.a. Please provide a link to the	Council approval at www.surrey.ca/climateaction. Prior assessment
document (URL).	in 2013 Climate Adaptation Strategy also posted on this site.

14. What are the three most significant climate hazards faced by your jurisdiction	"Overland flooding", "Coastal flooding, storm surge events and/or other coastal hazards", "Extreme heat and heat stress", "Wildfire", "Wind, rain, and other storm events", "Ecological, cultural and/or human health impacts (examples of cultural impacts include threats to identities, languages, and livelihoods; examples of ecological impacts include biodiversity loss, erosion, invasive species, ecosystem changes)", "Water shortage", "Extreme cold, snow and ice"
15. Are you responding to this survey on behalf of a Modern Treaty Nation?	No
16. Based on the hazard you indicated as most significant in question 14, as a local government, which groups are most exposed/vulnerable to the impacts of that climate hazard?	"Low-income households","Indigenous peoples","People experiencing homelessness"
17. Based on the hazard you indicated as second most significant in question 14, as a local government, which groups are most exposed/vulnerable to the impacts of that climate hazard?	"Indigenous peoples"
18. Based on the hazard you indicated as third most significant in question 14, as a local government, which groups are most exposed/vulnerable to the impacts of that climate hazard?	"Low-income households","Indigenous peoples","Newcomers to Canada (immigrants and refugees)","People experiencing homelessness","Seniors"
19. Select the top three factors your local government or Modern Treaty Nation needs most to increase the capacity to adapt to climate impacts and build community resilience.	"Increased funding","Increased staff capacity","Political support and direction"
20. How does your local government or Modern Treaty Nation ensure equitable access to, and distribution of, climate action opportunities and benefits?	"By collecting and analyzing disaggregated and/or spatial data on the impact of climate actions","By engaging with equity seeking groups/frontline communities most impacted by climate change"
21. Do the climate action plan(s) and priorities of your local government or Modern Treaty Nation align with the climate action plans and priorities of senior levels of government?	"Yes, we align climate action plan(s) and priorities with the federal 2030 Emissions Reduction Plan", "Yes, we align climate action plan(s) and priorities with the provincial CleanBC Roadmap to 2030", "Yes, we assess our plans and priorities for multilevel alignment"

22. Is your local government a signatory to the B.C. Climate Action Charter or a Modern Treaty Nation?	Yes
23. To demonstrate commitment to climate action, climate investments (i.e., matching funding or in-kind contributions) equivalent to 20% of the provincial funding received are required of local governments and Modern Treaty Nations. The intent is to show past, current, and future investments in climate action and create awareness and education.	"Staff time","Climate or energy studies and/or assessments","Climate or energy plans, policies and/or strategy development","Climate resilient infrastructure and/or capital project(s)"
24. Please provide your (or survey primary contact's) first and last name.	Vipin Sachdeva
25. Please indicate your (or survey primary contact's) position with your local government or Modern Treaty Nation.	Senior Manager, Finance



Local Government Climate Action Program Attestation Form

- 1. Complete and sign this form by filling in the fields below.
- 2. Email the completed and signed form to LGCAP@gov.bc.ca.

I, the Chief Financial Officer, or equivalent position, of (name of local government) confirm the following:

- 1. That Local Government Climate Action Program funding has been, or will be, allocated to climate action.
- 2. That if funds are held in reserve, they will be spent by the end of March 2025.
- 3. That a completed and signed version of this form will be submitted by email to the Climate Action Secretariat, Ministry of Environment and Climate Change Strategy by July 29, 2022.
 - a. If council approval is required, it will be submitted no later than September 30, 2022.
- 4. That a completed and signed version of this form will be publicly posted by September 30, 2022.
- 5. That a completed and exported version of the program survey (submitted online) will be publicly posted by September 30, 2022.

Attested to by me at (name of lo	ocal government)
on (date)	_ 20

Signature of Attestor:

Printed Name of Attestor:

Title or Profession of Attestor (i.e. Chief Financial Officer or equivalent position):

Telephone Number of Attestor:

Email Address of Attestor:

Ministry of Environment and **Climate Change Strategy**

Climate Partnerships and Engagement Branch Climate Action Secretariat

Mailing Address: PO Box 9486 Stn Prov Govt

Email: env.mail@gov.bc.ca

Website: Victoria BC V8W 9W6 http://www2.gov.bc.ca/gov/content/ environment/climate-change

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