

# SACKVILLE

## CORPORATE ACTION PLAN UPDATE

### MILESTONE 4

March 2020



Activity + Timeline	Partners/Resources	Estimated Emissions Reduction	Milestone 4 Updates
1. Street Lighting			
<p>Installed 910 new LED streetlights throughout Sackville. 879 were 100 Watt HPS Equivalent, 1 was a 150 Watt HPS Equivalent and 30 were 200-Watt Equivalent. They use 50-60% less energy.</p> <p>2014 (completed)</p>	<p>NB Power</p> <p>The Town pays NB Power on a per light basis.</p> <p>Cost: N/A We rent them from NB Power, but overall, we estimated saving 8%</p>	<p>910 new LED Lights. We estimated saving 8% on NB Power Bill (\$12-13,000/month or 135K/year). 910 LED lights x 0.225 t CO2e/annually = 204.75 t CO2e saved per year. (Savings of 0.225 t CO2e based on NB Power's estimates)</p>	<p>Completed</p>

2. Municipal Vehicle Fleet			
<p><u>New Bulldozer</u> Replaced a 1976 Caterpillar D-9 Dozer with a new 2014 Case D-6 dozer.</p> <p>2014 (completed)</p>	<p>Public Works Department, Treasurer</p> <p>Funded via Capital out of Revenue Budget</p> <p>Cost: \$140,000</p>	<p>A litre of gasoline is generally accepted to emit 2.38kg of carbon dioxide. A more fuel-efficient bulldozer will reduce emissions. According to CAT, a heavy equipment manufacturer, there is a 10- 15 percent improvement in fuel efficiency with a Tier 4 engine (<a href="http://www.cat.com/en_US/products/new/equipment/dozers/medium-dozers/1000004501.html">http://www.cat.com/en_US/products/new/equipment/dozers/medium-dozers/1000004501.html</a>). Total savings will depend on how much it is used</p>	<p>Completed</p>
<p><u>Sidewalk Snow-Plow</u> Replacing a 1981 Bombardier with a new modern 2015 Sidewalk Plow, equipped with a Tier 4 engine.</p> <p>2015 (completed)</p>	<p>Public Works Department Finance Treasurer</p> <p>This purchase will be funded via the 2015 Capital out of Revenue Budget. A tender process will be required.</p> <p>Cost: \$140,000</p>	<p>A litre of gasoline is generally accepted to emit 2.38kg of carbon dioxide. A more fuel-efficient bulldozer will reduce emissions. According to CAT, a heavy equipment manufacturer, there is a 10- 15 percent improvement in fuel efficiency with a Tier 4 engine (<a href="http://www.cat.com/en_US/products/new/equipment/dozers/medium-dozers/1000004501.html">http://www.cat.com/en_US/products/new/equipment/dozers/medium-dozers/1000004501.html</a>). Total</p>	<p>Completed</p>

		savings will depend on how much it is used.	
New, more fuel-efficient, fire trucks will be purchased  2017 and 2021	Sackville Fire Department  Town of Sackville Budget	A litre of gasoline is generally accepted to emit 2.38kg of carbon dioxide. More fuel-efficient fire trucks will reduce emissions.	Has been purchased. Replaced a 2000 GMC Top Kick, 1,000 Gallon Tanker with a 2019 Freightliner – 2,500 Gallon Tanker. Potential higher fuel efficiency will have a negligible effect because of the heavier weight of the truck.

Activity + Timeline	Partners/Resources	Estimated Emissions Reduction	Milestone 4 Updates
New, more fuel-efficient truck will be purchased  2018 (3 trucks)	Town of Sackville  Town of Sackville Budget	A litre of gasoline is generally accepted to emit 2.38kg of carbon dioxide. A more fuel-efficient truck will reduce emissions.	Replaced 2008 Chev Reg Cab ½ ton truck with 2019 Dodge Reg Cab ½ ton truck  Replaced 2007 Ford ½ ton 4x4 with a 2018 Reg Cab GMC ½ ton 4x4  Replaced 2005 Chev ½ ton 4x4 with 2018 Reg Cab Chev ½ ton 4x4
New, more fuel-efficient loader will be purchased  2017	Town of Sackville  Town of Sackville Budget	A litre of gasoline is generally accepted to emit 2.38kg of carbon dioxide. A more fuel-efficient loader will reduce emissions.	Purchased in 2017 Hyundai model HL960.
Hybrid Vehicle for Bylaw Officer We replaced a 2003 Chevy Cavalier 2014 Ford C Max  2013 (completed)	Bylaw officer, Treasurer  Funding, research into hybrid vehicle options.  Cost: \$29,045	Saving of roughly 3300kg of CO2 based on 20,000kms/annually.	Completed
<b>3. Improve transportation infrastructure and culture</b>			

<p>Electric Vehicle Charging Station installed at the Sackville Visitor Information Centre at 34 Mallard Drive. Is a Sun Country 100amp level 2 charger. The installation of this infrastructure allows the Town to purchase electric vehicles (EVs) or plug in hybrid vehicles, as well as local residents.</p> <p>September 2014 (completed)</p>	<p>Manager of Corporate Projects, EOS Eco-Energy Inc. and Sun Country Highway</p> <p>Funding (was partially provided from EOS through the Mount Allison University Students' Union Green Investment Fund). Town of Sackville will also cover ongoing cost of charges for the public.</p>	<p>NB Power estimates that the average midsize vehicle emits 4,613kg of CO2 annually (based on 20,000km) compared to 725kg for a BEV (all battery) and 1,352kg for a PHEV (plug in hybrid).</p>	<p>Completed</p>
--	--	---	------------------

Activity + Timeline	Partners/Resources	Estimated Emissions Reduction	Milestone 4 Updates
<p>Active Transportation Plan for Municipal Staff (this includes Walk to Work-Day or Week)</p> <p>Ongoing</p>	<p>Department of Recreation Programs and Events</p> <p>Promotion, incentives/rewards, publicity</p>	<p>A litre of gasoline is generally accepted to emit 2.38kg of carbon dioxide. If one staff member walks to work instead of driving, and would normally travel 10km/day, then they can save 1.02L of fuel and 2.38 kg of CO2 per day (based on average fuel efficiency in 2010 of 10.2L/100km). Total savings will depend on how many people participate and how often it is done.</p>	<p>The Recreation Master Plan included the development of a Municipal Active Transportation and Trails Plan in 2020.</p>
<p>4. Buildings</p>			
<p>Storage facility that uses in- floor heating that is very efficient, and uses excess heat from the electric boiler at the Tantramar Veterans Memorial Civic Centre</p>	<p>Town of Sackville</p> <p>Town of Sackville Budget</p>	<p>This storage facility uses excess heat in an efficient way to heat the storage building. This will use energy that would have been wasted, as well as saving on energy for the building and therefore reducing CO2 emissions.</p>	<p>The storage facility was completed in 2018. The efficient electric boiler is used for in-floor heating.</p>

Activity+ Timeline	Partners/Resources	Estimated Emissions Reduction	Milestone 4 Update
--------------------	--------------------	-------------------------------	--------------------

<p>Development of Municipal Energy Efficiency Policy. The plan will formalize internal plans and goals including use of the vehicle fleet, building use (lights, temperature) etc.</p> <p>Use sustainability lens to evaluate projects. One example is the Idling Policy for municipal vehicles. Another example is the use of LED holiday lights.</p> <p>Short- and long- term</p>	<p>Manager of Corporate Projects, Town Engineer, Treasurer</p> <p>Staff time for plan development and implementation and monitoring</p>	<p>Depending on the specific policies implemented, significant emissions could be reduced. A specific example would be the Idling Policy. If the average midsize car were to idle for an hour it would use 0.76L of gas. This translates to 1.8 KG of CO2 for every hour a car idles. In addition, for every two minutes a car idles, it uses enough gas to travel about 1.5 km. Therefore, significant emissions could be reduced. The town is using LED holiday lights, which can reduce CO2e per two strings of lights, similar to each light installation; with approximately 50 installations in town, 3.42 t CO2e is saved.</p>	<p>This is not a formal or written policy.</p> <p>There are motion sensors on the lights in the Town Hall.</p>
---	---	---	--

5. Other			
<p>Replace lights at baseball field on Lorne Street with LED lights as part of the Lighting Replacement Program.</p> <p>2016-2017</p>	<p>Town of Sackville</p> <p>Town of Sackville has applied to the NB Environmental Trust Fund to pay for this project. If not, the project will take place from 2016-2021 with the Town of Sackville and other funding.</p>	<p>If 20 exterior lights are upgraded to LED:  20 LED lights x 0.225 t CO2e/annually = 4.5 t CO2e saved per year. (Savings of 0.225 t CO2e based on NB Power's estimates)</p>	<p>All lights have been replaced with LEDs.</p> <p>The lights for the parking lot at the Visitor's Centre and the Civic Centre have also been replaced with LEDs.</p> <p>The lights inside the Civic Centre continue to be replaced with LEDs, as needed.</p>

Activity + Timeline	Partners/Resources	Estimated Emissions Reduction	Milestone 4 Update
---------------------	--------------------	-------------------------------	--------------------

<p><u>Trailblazer youth education programs</u> Trailblazers Wilderness Survival Camp (summer) for 35 children ages 5-11. Activities include plant identification, water purifying, environmental related activities, nature artwork, etc. at Beech Hill Park.</p> <p>Trailblazers Afterschool Program (fall and winter programs) for at least 20 grade 3 and 4 students per session (2 sessions/week). Grades 5-7 are 2 days per week. Activities include building snow trenches, identifying plants, animals, tracks, etc.</p> <p>2015 - present</p>	<p>Manager of Recreation Program and Events, Town of Sackville</p> <p>Town of Sackville Budget</p>	<p>Educating youth about the outdoors and fostering respect for the environment can encourage them to make choices that save energy and can help contribute to emissions reductions.</p>	<p>Trailblazers Wilderness Survival Camp consists of two week-long day camps, ages 5-8 and 9-12, for 40+ children. The same activities are being used.</p> <p>Trailblazers Afterschool Program (fall and winter programs) consists of 4 sessions per week (Mondays K-2 and grades 5-8, Tuesdays grade 3, Wednesdays another K-2 and grade 5-8 group, Thursdays grade 4) for at least 18-20 students per day. Grades 5-8 are junior leaders and provide support to the paid leaders in working with the k-2 children. The same activities are being used.</p>
Activity + Timeline	Partners/Resources	Estimated Emissions Reduction	
<p>Planting trees in Sackville (10- 12 trees per year, at least 60 – 120 trees in various locations)</p> <p>2015 – ongoing until desired tree canopy is achieved. 12 trees were planted in 2015.</p>	<p>Public Works, Corporate Projects</p> <p>Town of Sackville will fund planting trees to improve tree canopy. Town has also applied for CN EcoConnexions grant to plant 120 trees in 2016.</p>	<p>According to the Arbor Environmental Alliance, a single tree can absorb CO2 at a rate of 21.8 kg per year - <a href="http://www.arboreenvironmentalalliance.com/carbon-tree-facts.asp">http://www.arboreenvironmentalalliance.com/carbon-tree-facts.asp</a>. So, if Sackville plants 12 trees each year over the next 6 years, this would give 72 trees. By 2021, the trees would be reducing CO2 emissions by at least 1570 kg/year. If Sackville is awarded the CN EcoConnexions grant, 130 trees will be planted by 2016, and these trees will absorb 2834 kg of CO2 emissions per year, every year.</p>	<p>At least 15 trees have been planted every year. 200 trees have been planted in the last 5 years.</p> <p>Sackville was given 100 trees this year through CN. Some of these trees will be planted around the new retention pond.</p>

<p>Presentation by Tourism staff of a short play on energy efficiency at the Sackville Visitor Information Centre and other places in Sackville during summer 2015.</p> <p>The play will encourage local people to find ways to conserve energy and to live in a more environmentally responsible way. People will be inspired to find ways to improve their efforts, including setting a 10% target for themselves (echoing the Town's target).</p> <p>Summer 2015 (completed)</p>	<p>Department of Tourism and Business Development.</p> <p>Develop scripts, costumes and props.</p>	<p>If local residents make changes and choose more environmentally friendly energy and lifestyle options, significant emissions can be reduced.</p>	<p>Completed</p>
---	--	---	------------------

### New Actions (since the creation of Milestone 3)

Activity + Timeline	Partners and Resources	Estimated Emissions Reduction	Milestone 4 Updates
3 stream waste	Town of Sackville		All municipal buildings use the 3-stream waste program. The council could change the bylaw, as part of their Climate Change Action Plan, in terms of residential buildings, over 4 units, having to use the 3-stream waste program. They could possible do a pilot program with an apartment building, to work out the logistics of adding more 3 stream waste. They are having a meeting with the contractor that collects the waste and takes it to eco360, to discuss their capacity and what it would take to change that. There is a financial advantage in using the 3-stream system, because the tipping fees are lower for sorted waste as opposed to non-sorted waste.
BYOC	Town of Sackville		The town has established a bring your own cup policy. During events, there is no plastic, in terms of plates, cups, utensils, they are all compostable and biodegradable plastics.
Climate Change Awareness Coordinator	Town of Sackville		The Town of Sackville has hired a Climate Change Awareness Coordinator through the Future Ready NB Program to work with them thing summer.