

# MVCA 2018 CARBON FOOTPRINT REDUCTION & COMPENSATION STRATEGY

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## PURPOSE:

To outline the progress that MVCA has made in reducing/compensating our carbon footprint in 2017.

To outline the actions that MVCA will be taking in 2018 to reduce and compensate for its carbon footprint.

### 1. 2017 Carbon footprint strategy progress report

In 2017, fuel and electricity quantities were monitored in all aspects of the Authorities operations. These results are listed below:

Product	Quantity	Emission Factor	Tonnes CO2
Gasoline	13,141.86 Litres	2.3	30.23
Diesel	1,079.66 Litres	2.66	2.87
Propane	2,835.30 Litres	1.51	4.28
Electricity	182,790.51 kWh	0.041	7.49
Director/staff mileage	15,343 km	2.44	4.74
<b>TOTAL Tonnes CO2</b>			<b>49.61</b>

The Maitland Conservation's 2017 Carbon compensation strategy was to plant twice as many trees as required to compensate for 100% of carbon emissions each year (Base year-2014)

**2017 Carbon footprint: 49.61 tonnes of CO2 emitted = 149 trees x2 =298 trees to be planted in spring of 2018.** Trees will be planted at the Lake Wawanosh Conservation Area owned by the Maitland Conservation.

#### Carbon Footprint Reduction Initiatives completed in 2017.

- planted 314 trees at Lake Wawanosh Conservation Area to offset 2016 Authority CO2 emissions;
- purchased an all-electric 2017 Chevrolet Bolt in September to replace the 2010 Honda Civic.
- replaced 40 fluorescent lights to LED lights;
- promoted driving the most fuel efficient vehicle for the task required.

### 2. Authority Carbon Footprint Reduction Strategy for 2018

- Electrical equipment and appliances to be replaced with more efficient products that meet the required needs. All existing fluorescent lighting will be replaced with LED bulbs when replacement is required.
- To continue replacement of fleet cars with all-electric vehicles. MVCA is purchasing a Chevrolet Bolt in 2018. The Chevrolet Bolt meets the required range and features needed by the Authority and pricing/incentives have remained similar to 2017.
- Trucks will be replaced with electric powered or other non-fossil fuel source vehicles when technology is available at a reasonable price. 4 trucks are to be replaced.

- d) Tractors/Equipment will be replaced with alternative energy source when equipment reaches end of its lifespan and when technology is available. Replacement tractor at Falls Reserve Conservation Area in 2018 to be fuel efficient and conform to Tier 4 emissions standards.

### **Carbon Footprint Reduction Target**

To reduce our carbon footprint by 7.32 tonnes (approx. 3,000 litres) by 2020, this will primarily be accomplished by replacing MVCA's 3 cars with electric vehicles that started in 2017.

The conversion to an all-electric vehicle in 2017 helped to reduce approximately 0.8 tonnes of CO2 emissions from the authorities motor pool use in 4 months. This reduction puts the Authority on target with an estimation of 2.4 tonnes of CO2 reduced each year per electric vehicle.

### **2016-2017 Authority Carbon Comparison**

<b>Product</b>	<b>2017</b>		<b>2016</b>		<b>Year Difference</b>
	<b>Quantity</b>	<b>Tonnes CO2</b>	<b>Quantity</b>	<b>Tonnes CO2</b>	<b>Tonnes CO2</b>
Gasoline	13,141.86 L	30.23	14,147.59 L	32.54	-2.31
Diesel	1,079.66 L	2.87	1,043.91 L	2.78	+0.09
Propane	2,835.30 L	4.28	2,973.80 L	4.49	-0.21
Electricity	182,790.51 kwh	7.49	192,180.00 kwh	7.88	-0.39
Director/Staff Mileage	15,343 km	4.74	14,683 km	4.53	+0.21
<b>Totals</b>		<b>49.61</b>		<b>52.22</b>	<b>-2.61</b>

Caveat: The strategy assumes no major increases in program funding over the next 3 years. Major increases could result in an increase in our carbon footprint.

### **Carbon Compensation Strategy (base year 2014)**

Target: to plant twice as many trees as required to compensate for 100% of MVCA's carbon emissions each year. Trees to be planted on MVCA lands and/or community projects such as the Middle Maitland Headwaters Restoration Project.