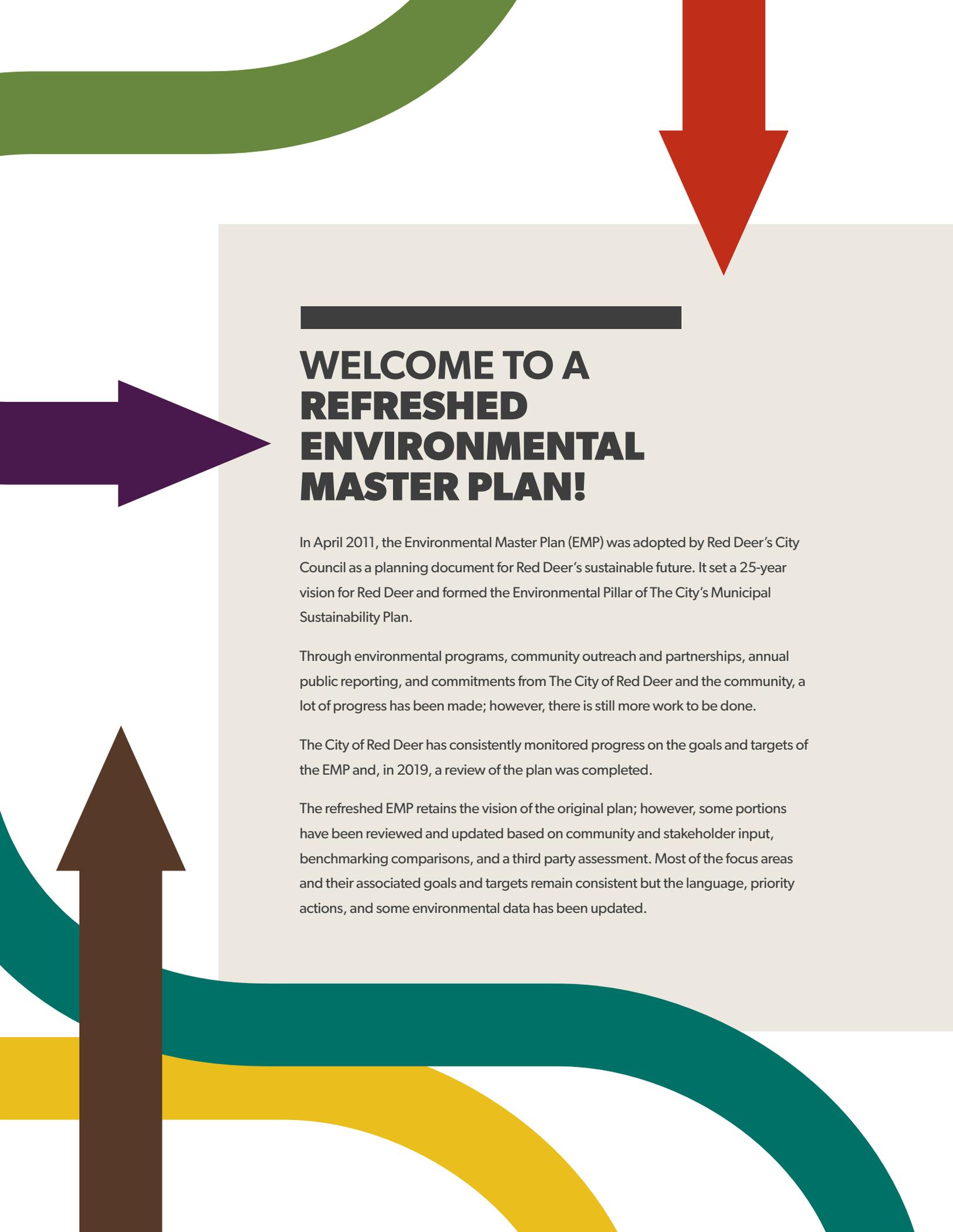




**OUR ENVIRONMENT  
OUR ROLE**

**2019 REPORT TO  
THE COMMUNITY**  
ENVIRONMENTAL  
MASTER PLAN



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## **WELCOME TO A REFRESHED ENVIRONMENTAL MASTER PLAN!**

In April 2011, the Environmental Master Plan (EMP) was adopted by Red Deer's City Council as a planning document for Red Deer's sustainable future. It set a 25-year vision for Red Deer and formed the Environmental Pillar of The City's Municipal Sustainability Plan.

Through environmental programs, community outreach and partnerships, annual public reporting, and commitments from The City of Red Deer and the community, a lot of progress has been made; however, there is still more work to be done.

The City of Red Deer has consistently monitored progress on the goals and targets of the EMP and, in 2019, a review of the plan was completed.

The refreshed EMP retains the vision of the original plan; however, some portions have been reviewed and updated based on community and stakeholder input, benchmarking comparisons, and a third party assessment. Most of the focus areas and their associated goals and targets remain consistent but the language, priority actions, and some environmental data has been updated.

## RESULTS BY FOCUS AREA

The 2019 EMP contains six focus areas: Water, Waste, Energy, Ecology, Community Design, and Air. Each metric has a performance target Red Deer is striving towards over the life of the plan. The target has set a 2035 timeline (waste metrics are the exception having a timeline of 2023).



WATER



WASTE



ENERGY



ECOLOGY



COMMUNITY DESIGN



AIR

## FOCUS AREA GOAL PROGRESSION TIMELINE

On the following pages each focus area baseline and target are outlined with the current state of progression towards the goal positioned along the timeline.

BASELINE



GOAL PROGRESSION



TARGET





# WATER



## GOAL

TO IMPROVE THE QUALITY OF OUR WATER RESOURCES AND INCREASE WATER CONSERVATION.

### POTABLE WATER CONSUMPTION

Monitoring potable water consumption for:

- A** Residential,
- B** Industrial, commercial, institutional

### ANNUAL WATER LOSSES RECORDED

Total water losses

### WATER QUALITY OF RECEIVING BODIES

Surface water quality in Red Deer (based on the Red Deer River Watershed Alliance's Integrated Water Management Plan water quality objectives).

**BASELINE**

**2009**

- A** Res: 242 litres/person/day
- B** ICI: 135 litres/person/day

**2015**

15% of total water use attributed to losses

**2017**

Total phosphorus: 0.0125 mg/L  
 Total nitrogen: 0.410 mg/L  
 Total suspended solids: 2.9 mg/L  
 Dissolved oxygen: 11.2 mg/L  
 E.Coli: 11 counts/100mL

**2019 RESULT**

- A** 25.5% reduction  
Res: 180 litres/person/day
- B** 24% reduction ICI:  
103 litres/person/day

Total phosphorus: 0.011 mg/L  
 Total nitrogen: 0.39 mg/L  
 Total suspended solids: 2.9 mg/L  
 Dissolved oxygen: 11 mg/L  
 E.Coli: 11 counts/100mL

**TARGET**

**2035**

30% Reduction over baseline

**2035**

7% maximum of total water use attributed to losses

**2035**

**Not to exceed water quality parameters**

Total phosphorus: 0.017 mg/L  
 Total nitrogen: 0.381 mg/L  
 Total suspended solids: 4 mg/L  
 Dissolved oxygen: 10.4 mg/L  
 E.Coli: 9 counts/100mL



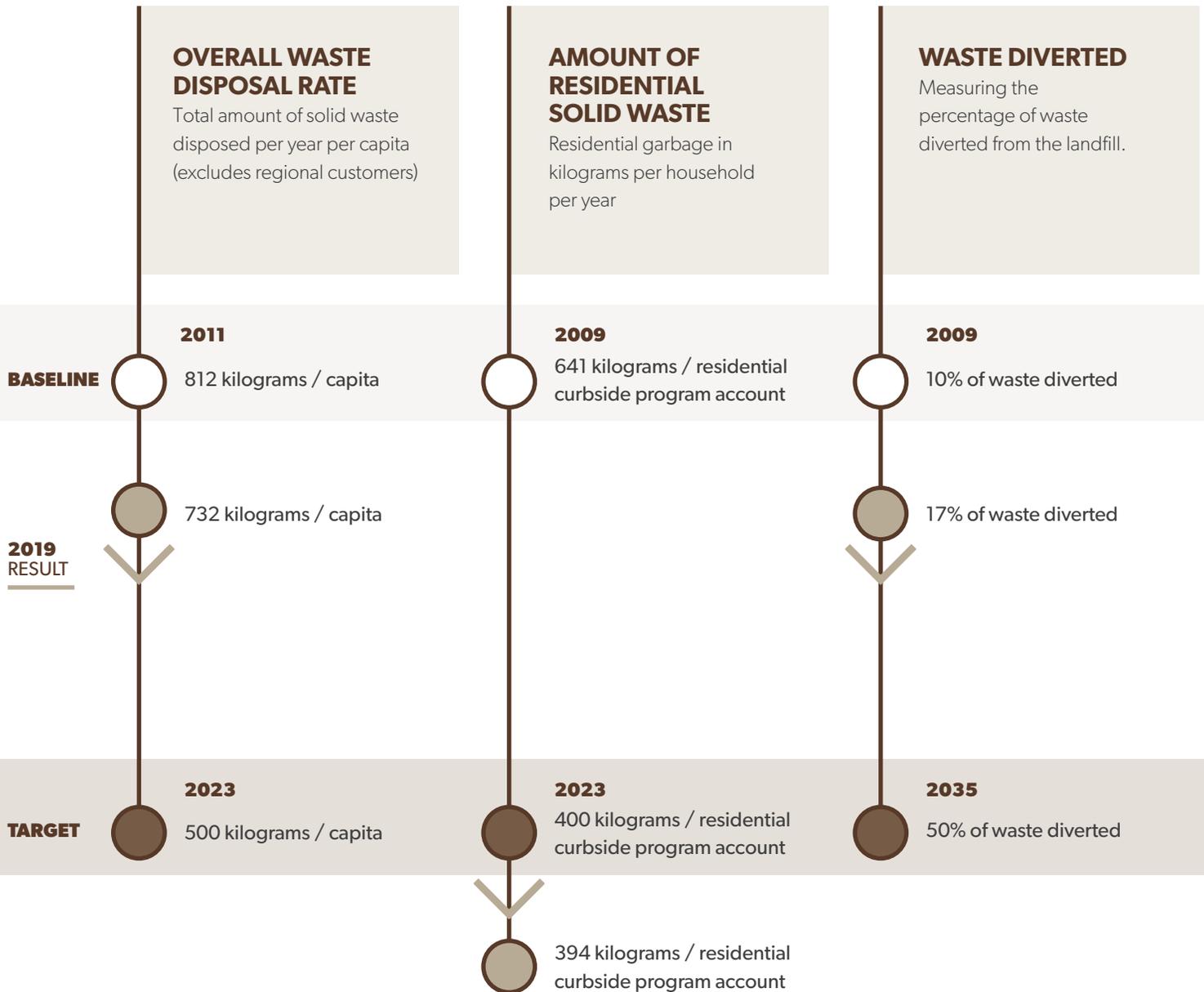


# WASTE



## GOAL

TO DECREASE THE AMOUNT OF WASTE GOING TO LANDFILL AND INCREASE WASTE DIVERSION OPPORTUNITIES.





**GOAL**

**TO REDUCE ENERGY USE AND MOVE TOWARDS USING RENEWABLE ENERGY SOURCES.**

**RENEWABLE & ALTERNATIVE ELECTRICITY SOURCES**

Percent of renewable and alternative electricity generated to satisfy the average demand for:

- A** Corporate (City operations)
- B** Community

**COMMUNITY ENERGY USE**

Total energy use for the community as a whole

**BASELINE**

**2010**

- A** 0.24% Corporate
- B** 0.05% Community

**2010**

13,941,000 GJ

**2019 RESULT**

Maximum percent that could be generated (capacity) to meet average electricity demand

- A** 8.89% Corporate
- B** 3.82% Community

14,820,000 GJ

**TARGET**

**2035**

- A** 25% Corporate
- B** 25% Community

**2035**

Not to exceed: 18,400,000 GJ



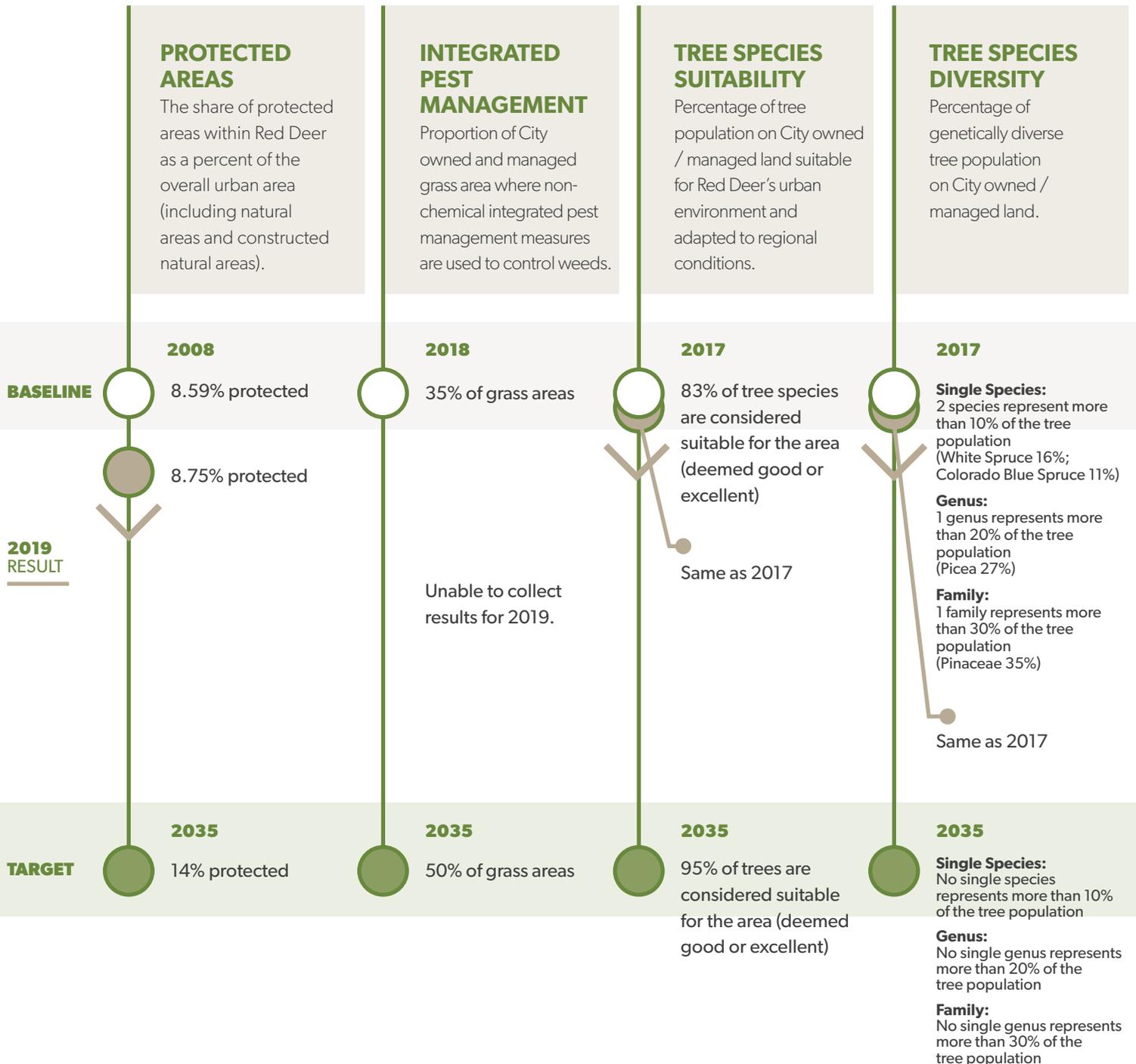


# ECOLOGY



## GOAL

TO PROTECT AND ENHANCE THE TERRESTRIAL AND AQUATIC HEALTH OF THE NATURAL HERITAGE SYSTEM.

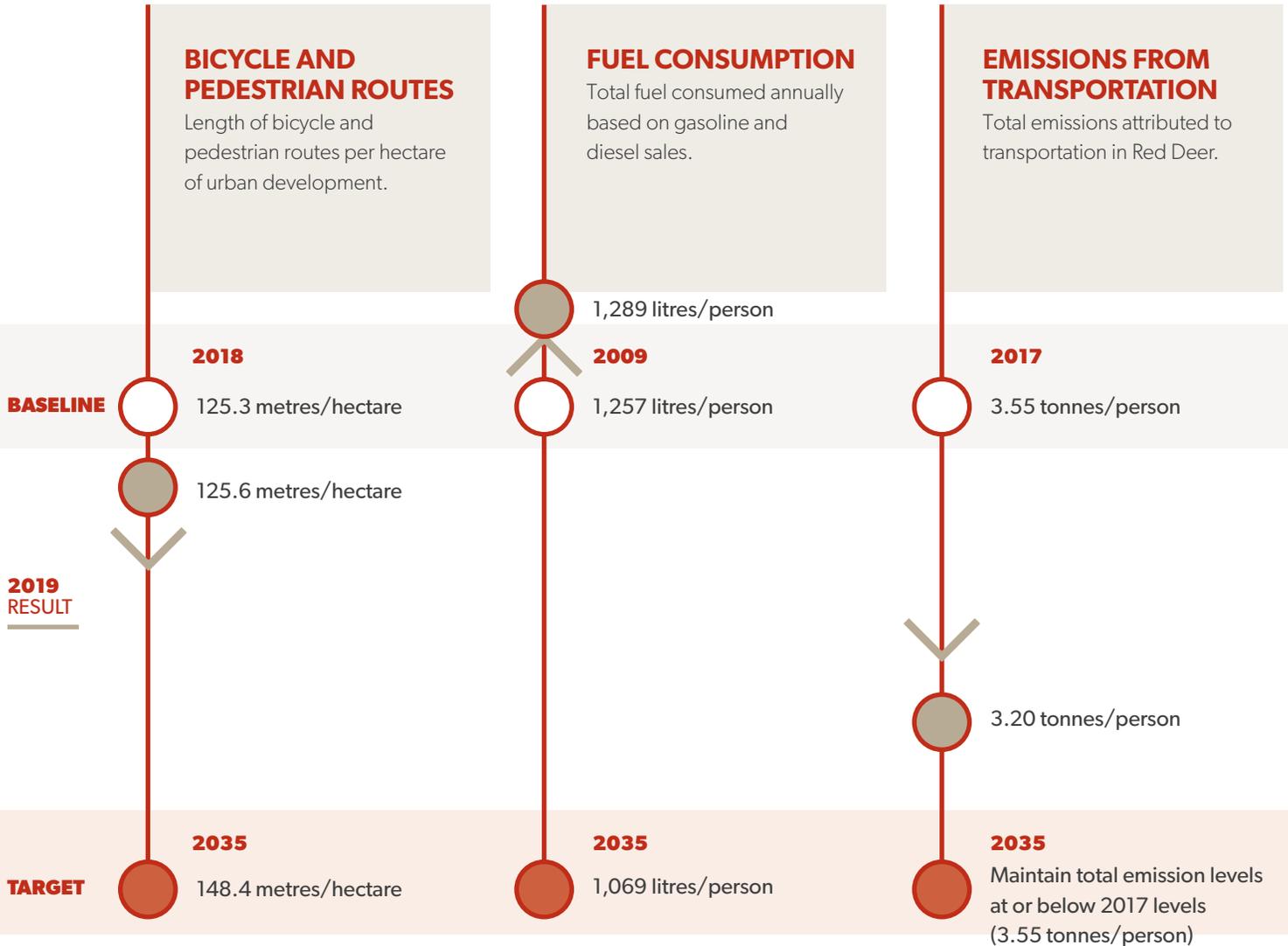




# COMMUNITY DESIGN

## GOAL

TO PLAN AND BUILD A WELL-CONNECTED, SUSTAINABLE COMMUNITY THAT CONTRIBUTES TO A QUALITY OF LIFE FOR RESIDENTS TO LIVE, WORK, MOVE AROUND AND ENJOY RECREATIONAL AND CULTURAL PURSUITS.





### TRANSIT RIDERSHIP

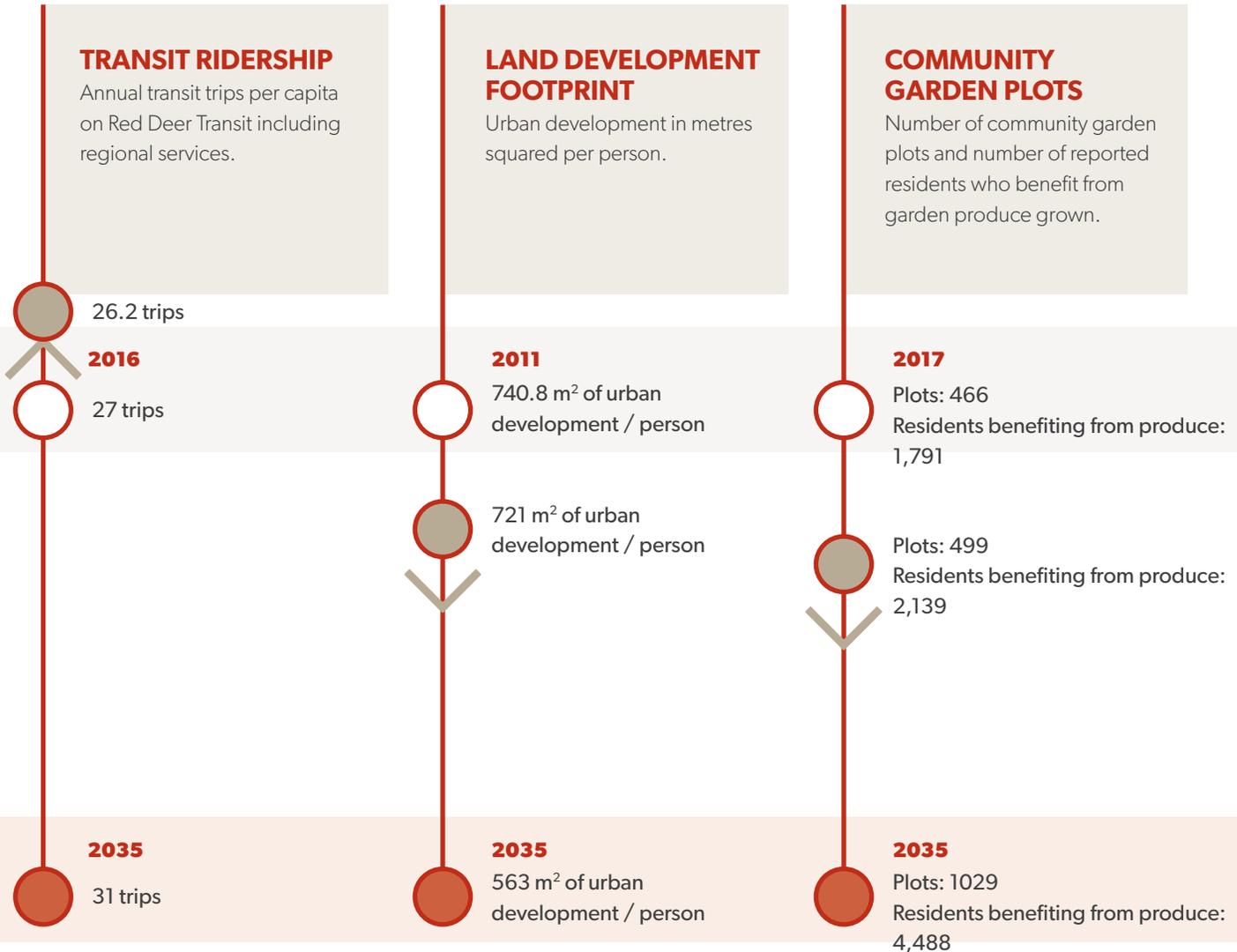
Annual transit trips per capita on Red Deer Transit including regional services.

### LAND DEVELOPMENT FOOTPRINT

Urban development in metres squared per person.

### COMMUNITY GARDEN PLOTS

Number of community garden plots and number of reported residents who benefit from garden produce grown.



# AIR



## GOAL TO IMPROVE AIR QUALITY AND REDUCE EMISSIONS.

### AIR QUALITY

Ambient concentrations of airborne pollutants – Canadian Ambient Air Quality Standards.

### GREENHOUSE GAS EMISSIONS (GHG) CORPORATE AND COMMUNITY

GHG emissions in tonnes for The City of Red Deer as an organization and for the community of Red Deer as a whole.

**BASELINE**

**2009**

Canadian Ambient Air Quality Standards / air quality management levels  
 PM<sub>2.5</sub>: yellow  
 O<sub>3</sub>: yellow  
 SO<sub>2</sub>: green  
 NO<sub>2</sub>: green

**2019 RESULT**

Canadian Ambient Air Quality Standards / air quality management levels  
 PM<sub>2.5</sub>: orange  
 O<sub>3</sub>: orange  
 SO<sub>2</sub>: green  
 NO<sub>2</sub>: orange  
*Most recent data available from 2015-2017.*

**TARGET**

**2035**

PM<sub>2.5</sub>: not exceed yellow  
 O<sub>3</sub>: not exceed yellow  
 SO<sub>2</sub>: not exceed yellow  
 NO<sub>2</sub>: not exceed yellow

**2010**

GHG emissions in tonnes (CO<sub>2</sub> equivalent)  
**A** Corporate= 151,347 tCO<sub>2</sub>e  
**B** Community= 1,674,171 tCO<sub>2</sub>e

GHG emissions in tonnes (CO<sub>2</sub> equivalent)  
**A** Corporate= 139,656 tCO<sub>2</sub>e  
 (Reduction of 7.7%)  
**B** Community= 1,539,141 tCO<sub>2</sub>e  
 (Reduction of 8.0%)

**2035**

GHG emissions in tonnes (CO<sub>2</sub> equivalent)  
**A** Corporate=50% reduction from 2010 baseline  
**B** Community=No greater than 10% increase from 2010 baseline

#### LEGEND

- Green** - maintain good air quality through proactive air management
- Yellow** - improve air quality using early and ongoing actions
- Orange** - improve air quality through active air management
- Red** - reduce pollutant levels through advanced air management actions.

A decorative graphic on the left side of the page features a large teal arrow pointing downwards, a yellow arrow pointing upwards, and a purple arrow pointing to the left. These arrows are overlaid on a yellow curved line that flows from the bottom left towards the right. A green curved line also flows from the bottom right towards the right. A dark grey horizontal bar is positioned above the main title.

## THE NEW EMP AND LOOKING FORWARD

The 2019 EMP was publicly launched at the Cyclovia Open Streets event in August 2019 using an interactive booth in the Sustainable Living Hub. Residents were able to participate, learn more about the refreshed plan, and share their perspectives with City staff.

The 2019 refreshed EMP plan was presented at the Climate Leadership Lab, the 2019 Community Planning Association of Alberta (CPAA) annual conference and the 2019 Alberta Professional Planners Institute (APPI) annual conference.

With successful implementation and next steps in mind, Red Deer can make powerful progress towards the Environmental Master Plan vision and, together with residents, community stakeholders and partners, we can achieve the environmental future envisioned.



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For more information, the full Environmental Master Plan  
can be viewed on our website at

[reddeer.ca/EMP](http://reddeer.ca/EMP)

