



# OUR ENVIRONMENT, OUR ROLE

2014 Report to the Community  
Environmental Master Plan



# OUR ENVIRONMENT, OUR FUTURE

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Red Deer's progress towards improving environmental performance and achieving goals set in the Environmental Master Plan (EMP) continues to be a strong priority for the community and for The City as a municipal organization. Over the last number of years, The City and its partners have demonstrated an ongoing commitment to implementing the plan's goals. Collaboration and leadership from many partners has allowed for important and significant environmental improvements to take shape.

The EMP was created in 2011 to provide both The City and its residents with a road map to improved environmental sustainability. To achieve this, the plan presents clear goals and measurable environmental targets, as well as recommendations for actions for both The City of Red Deer and the community as a whole.

This year's Environmental Master Plan 2014 Report to the Community highlights progress made in all seven focus areas: Air, Water, Transportation, Waste, Energy, Built Environment and Ecology. It identifies our accomplishments to date and also pinpoints areas where improvement is needed.

By the end of 2014, The City of Red Deer's population climbed to 100,000 citizens. Continued growth momentum brings both opportunities and challenges. The actions of local Red Deerians are central to ongoing improvement of our environmental performance. As previous annual reports demonstrated, action not only by the government, but also by many partners, organizations, and residents help us push forward to achieve the goals set in the EMP to build a sustainable future for ourselves and for the next 100,000 residents. This report helps to guide us with planning for the future of Red Deer.

## The Environmental Master Plan's seven focus areas are:

-  WATER
-  ECOLOGY
-  AIR
-  BUILT ENVIRONMENT
-  TRANSPORTATION
-  ENERGY
-  WASTE

## GENERAL HIGHLIGHTS

The Environmental Advisory Committee (EAC) is essential to the continued success of the EMP. Comprised of citizen representatives and City Councillors, the EAC has brought attention to the goals of the plan and some of the important environmental issues that need to be tackled by relying on it as an instrument within their mandate of advising Council and administration.



*Environmental Advisory Committee 2014*

# WATER

## Potable Water Consumption

- Residential potable water consumption decreased from 204 L per capita per day in 2013 to 195 L per capita per day in 2014. Red Deer has surpassed the 2015 target of 223 L per capita per day.
- Baseline in 2009: 242 L per capita per day.
- Industrial, commercial and institutional potable water consumption decreased from 118 L per capita per day in 2013 to 112 L per capita per day in 2014. Red Deer has surpassed the 2015 target of 124 L per capita per day.
- Baseline in 2009: 135 L per capita per day.

## Water Quality

- Water quality monitoring program began in 2012 to assess key points along the Red Deer River and creek tributaries; the first two years of data have been collected, with baseline data and targets to be established in 2016 in conjunction with the Urban Impact Risk Assessment for Alberta Environment and Parks.

**2014 Successes:** Developed a corporate policy of water conservation standards for City facilities.

**Actions in Progress:** Preparing a Water Conservation, Efficiency and Productivity Plan//preparing an Integrated Storm Water Management Plan//replacing water meters with Advanced Metering Infrastructure (AMI) technology.



## CHALLENGE YOURSELF!

- Purchase a rain barrel to harvest rain water (and receive credit on your utility account through the Rain Barrel Rebate Program).
- Protect the Red Deer River from pollution by preventing fertilizers, detergents, leaves and other materials from entering our storm drains.

# ECOLOGY

## Natural Areas

- Total land within the city's developed area dedicated to native natural features increased from 998 ha in 2013 to 999 ha in 2014. Red Deer has surpassed the 2015 target of 906 ha.
- Baseline in 2009: 863 ha.

## Man-Made Green Areas

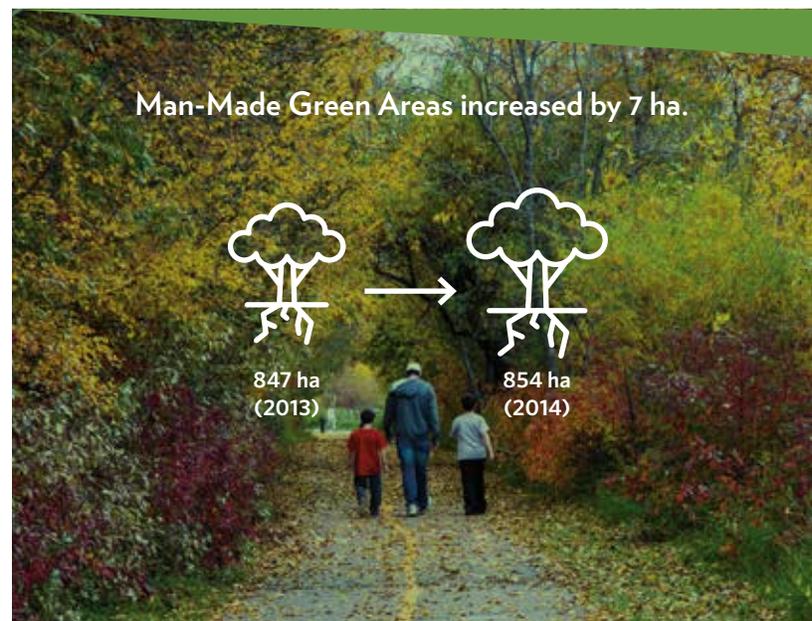
- Total land devoted to preserving man-made natural features increased from 847 ha in 2013 to 854 ha in 2014. Red Deer has surpassed the 2015 target of 849 ha.
- Baseline in 2009: 809 ha.

## Integrated Pest Management

- The amount of toxic pest control products used on City owned land increased from 180 mL per acre in 2013 to 197 mL per acre in 2014. Despite this, Red Deer has achieved the 2015 target of less than 206 mL per acre.
- Baseline in 2009: 210 mL/acre.

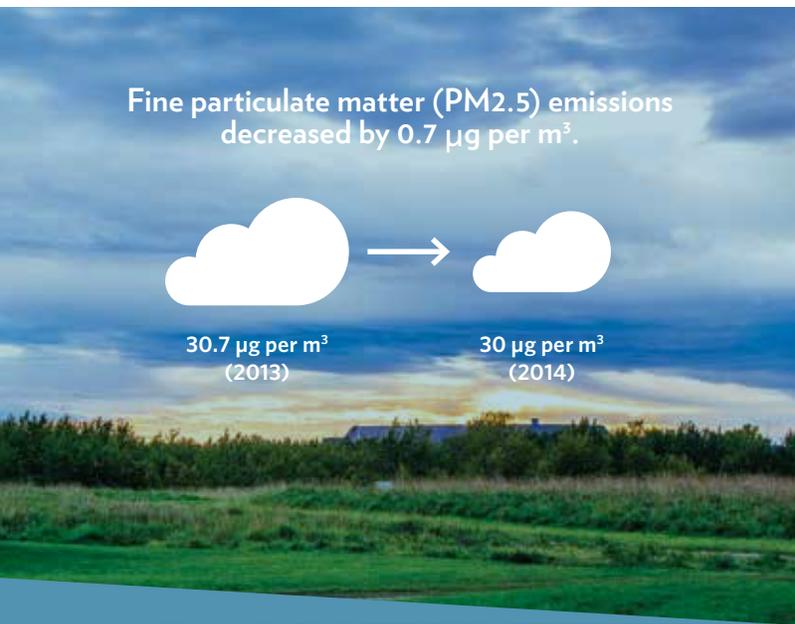
**2014 Successes:** Partnered with stakeholders to develop land conservation tools.

**Actions in Progress:** Enhancing the City set-back policy to include water body and ecological protection.



## CHALLENGE YOURSELF!

- Commit to protecting your favourite green space by participating in the Adopt a Park Program.
- Never release aquarium or domestic plants or animals (including fish) into waterbodies. These invasive species can harm the natural habitats of native populations.



### CHALLENGE YOURSELF!

- Avoid idling your vehicle when waiting in line. Turn off the engine or park the car whenever possible.
- Familiarize yourself with the Alberta Air Quality Health Index and how to use it to determine your level of health risk on a given day.



## AIR

### Greenhouse Gas Emissions

- Corporate greenhouse gas (CO<sub>2</sub>) emissions increased from 1.40 tonnes per capita in 2013 to 1.45 tonnes per capita in 2014. Given these results, Red Deer is not on track to achieve the 2020 target of 0.97 tonnes per capita.
- Baseline in 2010: 1.55 tonnes per capita.

### Air Quality

- Red Deer is meeting its targets for reduced emissions in ozone, sulphur dioxide, nitrogen dioxide and carbon monoxide. Nitrogen oxide emissions did increase from 11.2 ppb in 2013 to 11.27 ppb in 2014.
- While fine particulate matter (PM2.5) emissions decreased from 30.7 µg per m<sup>3</sup> in 2013 to 30 µg per m<sup>3</sup> in 2014, Red Deer continues to exceed the Canada Ambient Air Quality Standards (CAAQS). Alberta Environment and Parks is developing a management plan to address these levels in the Red Deer region.

**2014 Successes:** Completed the Greening the Fleet project proposing alternative fuel sources, smart driving, and right-sizing of fleet vehicles.

**Actions in Progress:** Working with the Government of Alberta to identify strategies to mitigate effects of large industrial emitters//expanding the community idle free program.



### CHALLENGE YOURSELF!

- Grow your own food, locally, by joining in on a community garden or converting your yard into a garden.
- If you are completing renovations, consider adopting green building design principles.



## BUILT ENVIRONMENT

### Land Development Footprint

- Per capita land consumption increased from 697 m<sup>2</sup> per capita in 2013 to 717 m<sup>2</sup> per capita in 2014. Red Deer is not currently on track to achieve the 2015 target of 711 m<sup>2</sup> per capita.
- Baseline in 2009: 741 m<sup>2</sup> per capita.

### Community Gardens

- The land area devoted to community gardens and urban agriculture did not change from 2012 to 2014, remaining at 0.21 m<sup>2</sup> per capita. Red Deer is working to achieve the 2015 target of 0.5 m<sup>2</sup> per capita.
- Baseline in 2009: 0.4 m<sup>2</sup> per capita.

**2014 Successes:** Developed in-fill guidelines and standards that emphasize minimum densities, compact form and environmental design standards.

**Actions in Progress:** Creating a community garden stewardship initiative//studying residential, commercial and industrial density.

# TRANSPORTATION

## Total Fuel Consumption

- Total gasoline and diesel consumption increased from 1,190 L per capita in 2013 to 1,232 L per capita in 2014. Red Deer is not currently on track to achieve the 2015 target of 1,156 L per capita.
- Baseline in 2009: 1,257 L per capita.

## Dwelling Units Within 400 Metres of Green Space, Commercial Zoned Properties, Schools, and Transit Stops

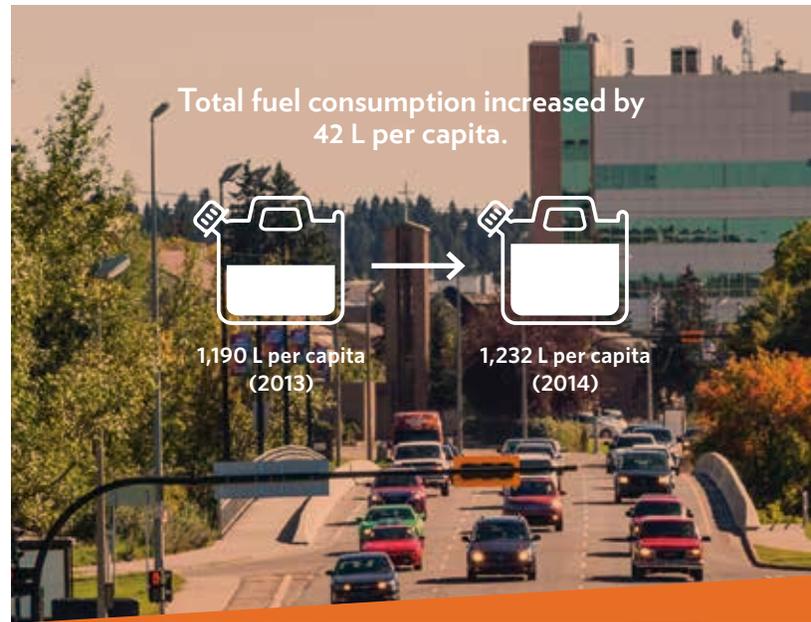
- The percentage of dwelling units within 400 metres of amenities such as trails, commercial sites and transit stops increased from 23% in 2013 to 24% in 2014. No target has been set.
- Baseline in 2012: 23%.

## Length of Trail Infrastructure

- Length of trail infrastructure improved from 1 km:579 residents in 2013 to 1 km:570 residents in 2014. Red Deer has surpassed the 2015 target of 1 km:639 residents.
- Baseline in 2009: 1 km:672 residents.

**2014 Successes:** Integrated sustainability principles from the EMP into the Integrated Transportation and Movement Study// continued to promote Carpool.ca.

**Actions in Progress:** Expanding Red Deer Transit service to neighbouring communities through the BOLT Regional Transit Service.



## CHALLENGE YOURSELF!

- Commit to using an alternative form of transportation one day a week by taking Transit, walking or cycling through the trail system, or join a carpool through [Carpool.ca](http://Carpool.ca).
- Take advantage of the BOLT Regional Transit Service when commuting to Blackfalds or Lacombe.

# ENERGY

## Building Energy

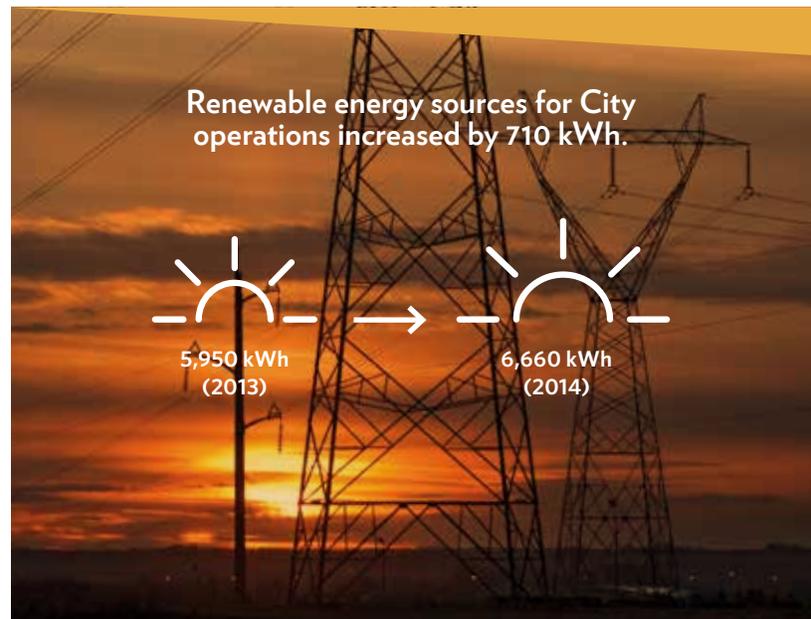
- Average building intensity increased from 426 ekWh/sq.m. in 2013 to 460 ekWh/sq.m. in 2014. Red Deer is not on track to achieve the 2015 target of 374 ekWh/sq.m.
- Baseline in 2009: 393 ekWh/sq.m.

## Renewable Energy Sources

- The City of Red Deer purchases and produces green power. The Civic Yards vehicle wash increased its production of power to the grid from 5,950 kWh in 2013 to 6,660 kWh in 2014. Red Deer is on track to achieve the 2015 target of using 30% green power.
- Baseline in 2009: 15% of energy from green sources.

**2014 Successes:** Introduced a Block Heater Timer giveaway and energy conservation awareness program for residents.

**Actions in Progress:** Developing environmental standards for City facilities//replacing incandescent lighting fixtures in City facilities with LED lighting.



## CHALLENGE YOURSELF!

- Use a block heater timer; 2-3 hours is all you need to properly warm up your vehicles.
- Borrow a home energy audit kit or thermal imaging camera from the Red Deer Public Library to find out how much energy is being consumed by your appliances or is lost in your home.
- Make the switch to LED lightbulbs where possible.



## WASTE

### Residential Solid Waste

- Total annual amount of solid waste increased from 640 kg in 2013 to 656 kg per capita in 2014. Red Deer is not currently on track to achieve the 2016 target of 550 kg as outlined in the Waste Management Master Plan.
- Baseline in 2009: 641 kg.

### Waste Diverted

- Percentage of waste diverted per year per tonne of waste landfilled has increased from 13% in 2013 to 14% in 2014. Red Deer is working to achieve the 2015 target of 20%.
- Baseline in 2009: 10%.

**2014 Successes:** Implementing the City's Waste Management Master Plan//continuing to run an education campaign around household and community composting.

**Actions in Progress:** Developing and implementing the Green Cart residential organics collection pilot program.

### CHALLENGE YOURSELF!

- Fill your blue box by recycling all plastics numbered 1 through 7.
- Sign up for e-billing to help reduce the amount of printed paper in circulation.
- Plan ahead and make waste free lunches by using reusable containers rather than plastic wraps and paper bags.



## AWARDS

In 2014, The City received an award relating to the implementation of the EMP, when City of Red Deer Transit received of the Parkland Airshed Management Zone (PAMZ) Action HERO Award, along with other organizations working to protect air quality.



## PARTNERS

- Alberta Bike Swap
- Alberta Energy Efficiency Alliance
- Alberta Environment and Parks
- Green Energy Doors Open
- Heart and Stroke Foundation
- Home Building Centre
- ICLEI Canada
- Lafarge Canada
- NOVA Chemicals
- Parkland Airshed Management Zone
- Primary Care Network
- Re-Think Red Deer
- Red Deer College
- Red Deer Public Library
- Red Deer River Watershed Alliance
- Red Deer Sheraton Hotel
- Waskasoo Environmental Education Society





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