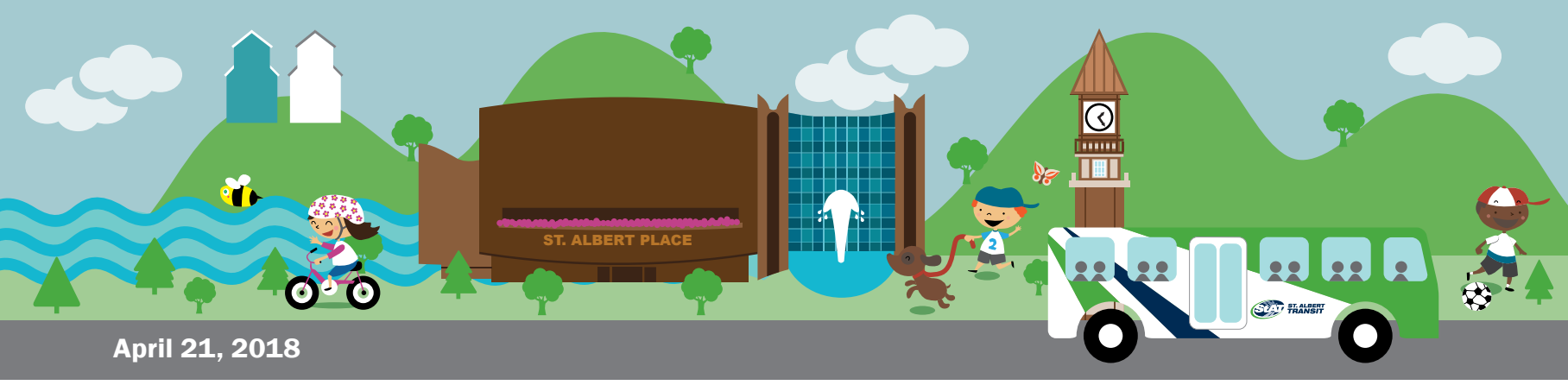


April 21, 2018

2017 REPORT ON THE ENVIRONMENT

Each year, the City of St. Albert publishes this *Report on the Environment* to update residents on the goals and targets set out in the Environmental Master Plan (EMP). The report provides a snapshot of our progress and highlights key projects and initiatives.

To view the EMP, visit **stalbert.ca** and search **Environmental Master Plan**.

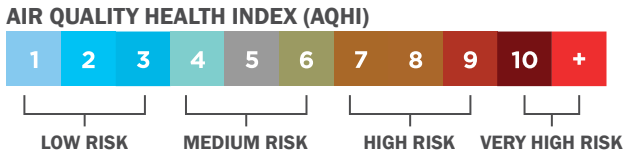
AIR AND ENERGY

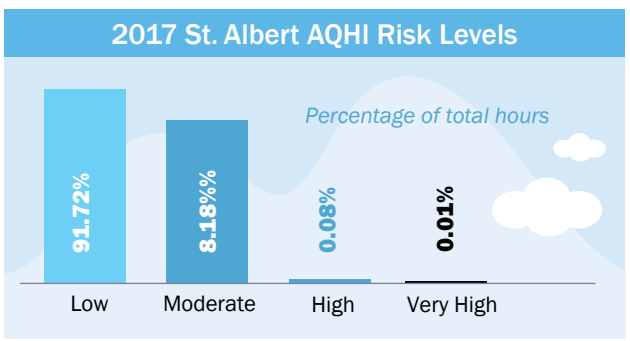
GOAL 1

MANAGE AIR QUALITY

St. Albert's Air Quality Monitoring Station, located at Salisbury Park, measures the amount of particulate matter, nitrogen dioxide, and ozone in the air. These components of urban smog can impact residents' health and can be particularly harmful for the elderly, the very young, and people with respiratory ailments.

Air quality can be affected by a number of factors, including traffic, industry, agriculture, wildfires, and even wind speed. The measurements taken by the Air Quality Monitoring Station are used by the Province of Alberta and Environment Canada to report the Air Quality Health Index (AQHI), which links outdoor air quality to health risks. The index uses a 10-plus scale to rank air quality.





In 2017, St. Albert air quality was in the low- to medium-risk range most of the time. The high-risk ratings, detected in July and August, were associated with smoke from forest fires.

The station began collecting data in April 2016. To meet the Environmental Master Plan's target date of establishing an air quality baseline by 2020, additional data is required. To view the data from the Air Quality Monitoring Station visit **airdata.alberta.ca**.

Download the App

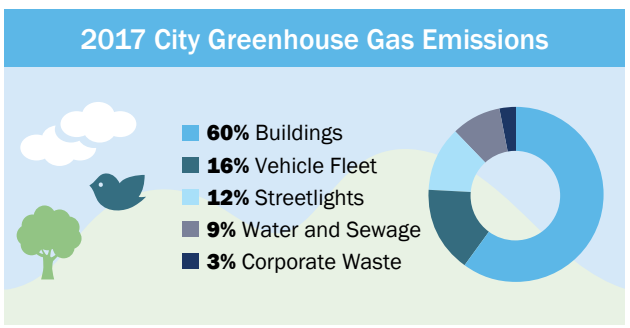
Download the **AQHI Canada app** to get real-time St. Albert air quality data from your smart phone.

GOAL 2

REDUCE ENERGY CONSUMPTION & GREENHOUSE GAS EMISSIONS

City Greenhouse Gas Emissions

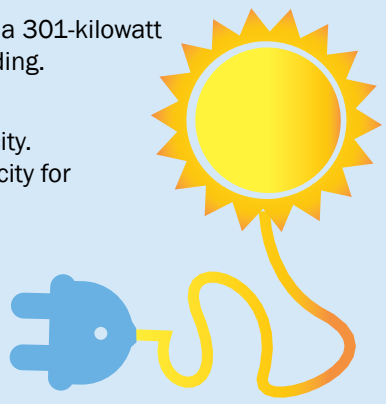
In 2017, the City of St. Albert's corporate emissions were approximately 10 per cent above 2008 levels. Our target is to reduce emissions to 20 per cent below 2008 levels by 2020. The chart on the right shows where our emissions originate, with buildings producing the greatest amount of emissions.

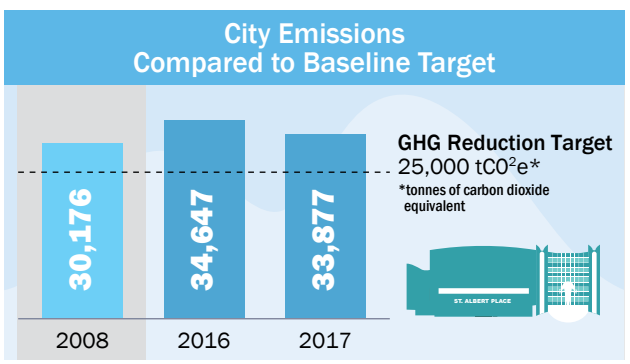


Here comes the sun. In 2017, the City installed a 301-kilowatt solar panel system on the St. Albert Transit building.

This solar array, the biggest in Alberta, supplies approximately one-third of the building's electricity. The system has the potential to generate electricity for 44 homes and reduce annual GHG emissions by 189 tonnes.

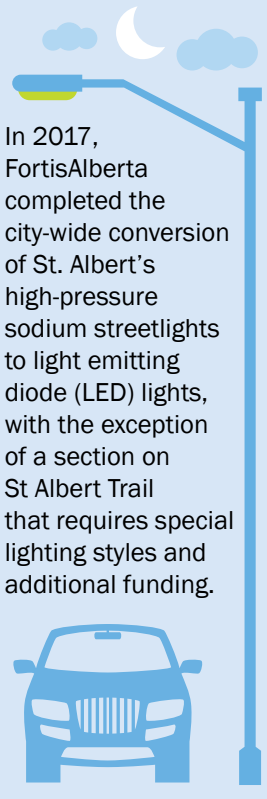
The City received a $125,000 rebate from Municipal Climate Change Action Centre for the purchase and installation of the solar panels.





AIR AND ENERGY

LED Streetlights



In 2017, FortisAlberta completed the city-wide conversion of St. Albert's high-pressure sodium streetlights to light emitting diode (LED) lights, with the exception of a section on St Albert Trail that requires special lighting styles and additional funding.

Community Greenhouse Gas Emissions

In 2017, community emissions were approximately 15 per cent above 2008 levels. Our target is to reduce emissions to 6 per cent below 2008 levels by 2020. The chart on the right shows where our emissions originate, with homes and transportation contributing most significantly to greenhouse gas levels.

HEAT is hot at the library. In the fall of 2017, the City made a Home Energy Assessment Toolkit (HEAT) available to residents who are interested in completing do-it-yourself home energy and water audits. The toolkit can be signed out of the St. Albert Public Library.

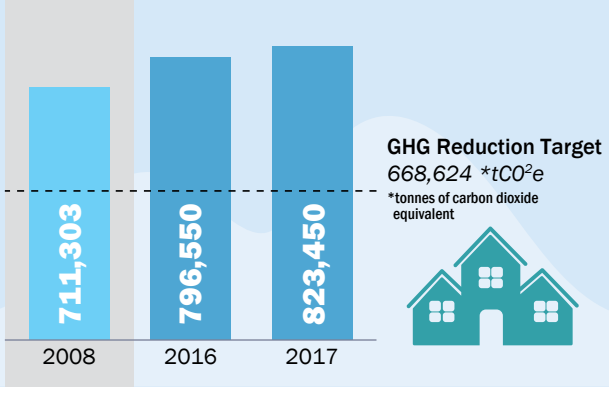
The toolkit is one of the hottest items in the library, with a steady "on-hold" list of about 50 residents.



2017 Community Greenhouse Gas Emissions



Community Emissions Compared to Baseline Target



LAND

GOAL 3

PROMOTE SUSTAINABLE NEIGHBOURHOODS AND TRANSPORTATION CHOICES

Shop Local

In April 2017, the #IGotItHere campaign promoted the benefits of local shopping. Five lucky participants won $100 gift cards from local businesses.

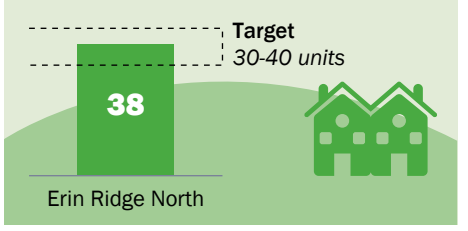


Neighbourhood Density

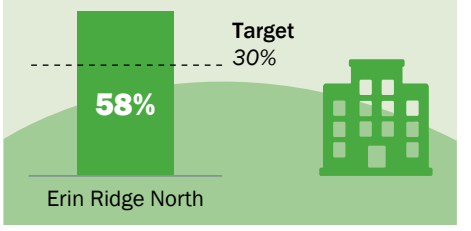
When new St. Albert neighbourhoods are designed, they must meet density targets that reduce urban sprawl, infrastructure costs, and the City's ecological footprint.

In 2017, the Erin Ridge North development plans exceeded these targets.

Residential Density
Dwelling units per net residential hectare



Medium and/or High Density
Per cent per new neighbourhood



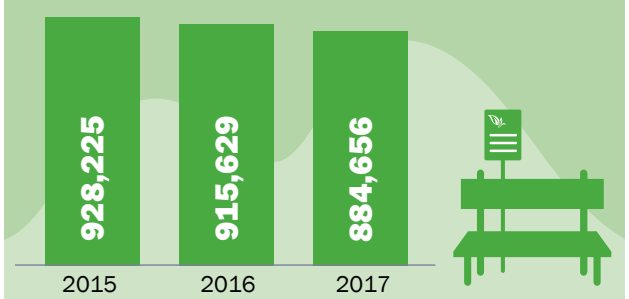
Transit Commuters

The Environmental Master Plan's public transit commuter target is to increase ridership equal to or greater than population growth.

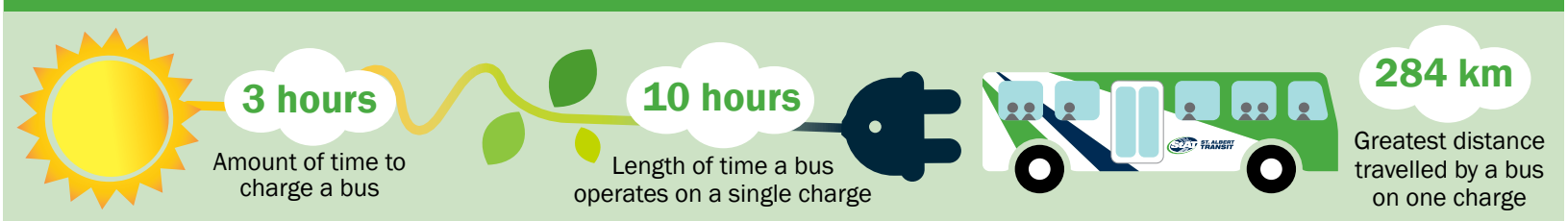
The most recent municipal census (2016) shows that St. Albert grew by 1.1 per cent. However, in 2017, St. Albert Transit ridership decreased 3.5 per cent. The downward trend in ridership is partially attributed to higher office vacancy rates in downtown St. Albert and to more commuters driving to work in Edmonton.

In 2017, a significant step was taken toward increasing ridership with the purchase of the land for the Campbell Road Park and Ride. Preliminary plans have been drawn up and construction is scheduled to begin May 2018.

Annual St. Albert Transit Ridership
Number of Commuters



2017 – Three Electric buses added to the St. Albert Transit Fleet



LAND

GOAL 4

PRESERVE AND MANAGE TREES, PARKS AND NATURAL AREAS

Tree Canopy

In June 2017, the City approved its first Urban Forest Management Plan (UFMP), which describes how St. Albert will manage and enhance its urban forest. The plan set a target of increasing the estimated land area of our tree canopy from 13 per cent to 20 per cent by 2037.

The UFMP recommends using the iTree modeling program to collect, store, and analyze data about the urban forest canopy. In 2017, City staff began to create a tree inventory and will continue to gather information throughout 2018. Once complete, the inventory data will be used to assess the City's tree canopy and targets.



The tree canopy provides clean air, shade, habitat for native species, and an enjoyable landscape.

Natural Areas Management

In 2017, the City hired an Environmental Coordinator—Sturgeon River and Natural Areas to coordinate the implementation of the 150 recommendations in the Natural Areas Assessment, Conservation and Management Plan, which were approved by Council in 2016.

The coordinator focused efforts on several projects: invasive species, storm water facilities, river water quality, and wildlife and habitat. The coordinator also worked in partnership with researchers at the University of Alberta on urban coyote diet and behaviour.

Sturgeon River Restoration

In 2017, the Environmental Coordinator applied for a Watershed Restoration and Resiliency Program grant through the Province of Alberta. If the application is successful, the funds received will support work over three years, starting in 2018, and include detailed designs for naturalization and restoration in six locations along the Sturgeon River.



Benefits of Natural Areas

Natural areas include treed areas like ravines, riparian areas adjacent to the river, and wetlands, such as the John E. Poole wetland. Natural areas provide wildlife with habitat, food, and protection from predators. Riparian areas and wetlands filter water and recharge groundwater supplies.



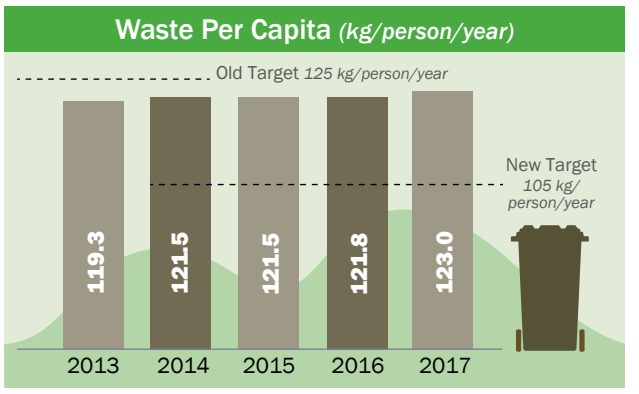
GOAL 5

WASTE REDUCTION AND DIVERSION

How much waste in a year?

In 2017, St. Albert residents generated about 123 kg of waste per person. This is a small increase over the past few years, but our waste per capita numbers tend to be pretty steady.

Waste per capita is calculated by dividing the total amount of residential garbage brought to the landfill by the city's total population. Waste that is composted, recycled, or brought to the City of St. Albert's Mike Mitchell Recycling Depot is not included in the waste per capita calculation.



Be Waste Wise

Prior to 2014, our waste per capita target was 125 kg per person per year. As you can see in the chart above, we succeeded in meeting that goal — and then some. Yay, St. Albert!

In the 2014 to 2017 Environmental Master Plan, we set a new goal — by 2020, we want to reduce the amount of waste generated to 105 kg per person per year. Here are some steps you can take to help meet our new goal:

- Sort your waste carefully into your Brown Garbage Cart, Green Organics Cart, and Blue Recycling Bag.
- Use reusable water bottles, coffee mugs, and grocery bags.
- Donate gently used clothing and other reusable items to local charities or share with friends.
- Keep a set of reusable utensils in your backpack or purse for meals on the go. Plastic utensils are not recyclable and go in the garbage.
- Bring unwanted, reusable items to the City's Take It or Leave It event. While you're there, you might even find something you're looking for!

Download the App

Never miss waste collection day again! Launched in November 2017, this handy app features all kinds of helpful information, including:

- Waste collection day reminders
- A "What Goes Where?" search tool for sorting tips
- Reminders for upcoming events, such as Curbside Large Item Pick-Up

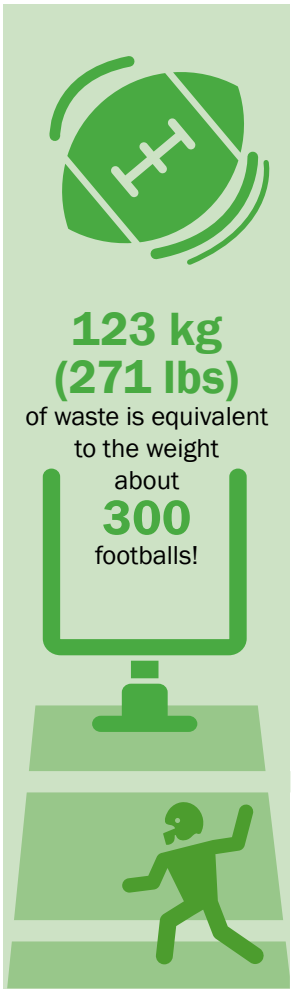
Since its launch, over 1,160 waste collection reminders have helped St. Albert residents set out their waste on time.



The most searched items on "What Goes Where?" are shredded paper, plastic bags, Styrofoam, plastic take-out containers, and plastic wrap. Do you know where these items go?

For more information about the Be Waste Wise App, visit **stalbert.ca/waste** or download the app from the App Store or Google Play.

How much waste per person?



LAND

Reaching Residents

3,362 people spoken to at 30 information booths (at Lifestyle Expo, Fountain Park Pool, Farmer's Market, St. Albert Place)

1,219 households visited by Curbside Waste Education team

239 "You're Waste Wise!" stickers awarded by the Curbside Waste Education team





Visit **stalbert.ca/waste** for more information about the City's waste and diversion programs.

Creating a Diversion

What is brown, green, and blue and can be found on St. Albert curbsides?

We all know the answer to that riddle! But did you know that using the curbside Green Organics Carts and Blue Recycling Bags is one of the best ways to meet our waste per capita target?

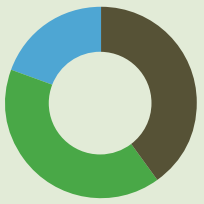
In 2017, 11,917 metric tonnes of waste were diverted from our landfill through the curbside pick-up of organic materials and recycling.

Weekly Curbside Collection

Brown Garbage Cart
7,953 Metric Tonnes

Green Organics Cart
8,092 Metric Tonnes

Blue Recycling Bag
3,825 Metric Tonnes



Less Means More

Interestingly, St. Albert residents are recycling fewer metric tonnes of waste and electronic devices than in past years. This may sound like residents are less committed to the environment, but that's not the case.

Because product packaging is lighter, paper consumption is decreasing, and electronic devices are becoming smaller, thinner, and lighter, we are producing less waste even though we are recycling as much as ever.

Community Connections

In 2017, St. Albert residents learned about waste reduction and diversion through a number of initiatives. We interacted with thousands of people at information booths and through the Curbside Waste Education program.

With this summer initiative, we take to the streets for waste collection day spot-checks. We hang waste reduction tips on door knobs to help residents improve waste sorting and set out and provide congratulatory "You're Waste Wise" stickers to thank households that did a great job.

Waste Drop Off

At the City's Mike Mitchell Recycling Depot, you can drop off hazardous and hard-to-recycle waste that is not acceptable for curbside pick-up. Hazardous waste should be disposed of safely to protect the environment. Residents can drop-off yard waste at the seasonal Compost Depot. Items will be chipped or composted instead of entering the landfill.

Waste Depot Diversion at a Glance

RECYCLING

376 — Cardboard, magazines, mixed paper, tin cans (metric tonnes)

ELECTRONICS

123 — Electronics (metric tonnes)

HAZARDOUS WASTE

134,400 — Paints (litres)

6,071 — Aerosal Paint (cans)

7,514 — Aerosol (Other) (cans)

67,200 — Hazardous Waste (litres)

35,840 — Oil (litres)

6,912 — Fluorescent & LED Bulbs (kilograms)

444 — Auto Batteries (units)

8,153 — Dry Cell Batteries (kilograms)

TIRES

5 — Bicycle (full cages)

18 — Automotive (full cages)

LEAF & YARD WASTE

1,771 — Leaf & Yard Waste (metric tonnes)

*In 2017, **64% of all residential waste** was diverted from the landfill. Our goal is to reach **75%** diverted by 2020.*

WATER

GOAL 6

What is a watershed?

A watershed is an area of land that contains streams and rivers that all drain into a single larger body of water, such as a larger river, lake or ocean. A watershed is about more than water though. It includes farmlands, cities, forests, grasslands, animals, birds, and even roads.

PROTECT AND IMPROVE THE STURGEON RIVER WATERSHED

In 2014, the Sturgeon River Watershed Alliance (SRWA) was formed to assess, advocate for, and protect the long-term health of the Sturgeon River watershed by developing and implementing a management plan. The City is one of 13 stakeholder groups, including 11 municipalities, that form the alliance.

New Funding

On World Water Day (March 22) 2017, the Alberta Government announced $12 million in guaranteed funding over three years for the province's 11 Watershed Planning and Advisory Councils, including the SRWA through its connection to the North Saskatchewan Watershed Alliance.

The SRWA played a key role in this announcement, having presented the draft resolution requesting provincial support for watershed planning to the Alberta Urban Municipalities Association (AUMA) and the Alberta Association of Municipal Districts and Counties. The resolution was passed at the AUMA Mayors' Caucus.

Five Studies

Five studies are currently underway that focus on land use, water quantity, water quality, and the ecological health of the Sturgeon River watershed.

Watershed modelling: We received a $100,000 grant from the Watershed Restoration and Resiliency Program from Alberta Environment and Parks. The modeling will identify restoration and conservation opportunities to improve flood and drought resiliency in the watershed.

Technical studies: In 2016, we received a $350,000 Alberta Community Partnership Grant to conduct four major technical studies. The studies began in 2016, continued throughout 2017, and will be completed by spring 2018.

WATER



IMPROVE WATER QUALITY OF THE STURGEON RIVER

Each year, water quality is tested at six locations on the Sturgeon River and four locations on Carrot Creek. In 2017, water testing revealed the following data:

Bacteria

- Carrot Creek is experiencing some increase in bacterial load, but levels within the City have not changed and do not exceed recreational water quality guidelines.
- Sources of bacteria can include wildlife, cattle, and pets. In the City, cleaning up after pets is an easy way to help reduce the levels of bacteria and nutrients in the river, keeping it safe for recreation.

Nutrients

- Nutrient levels, which include various forms of nitrogen and phosphorus, are higher in Carrot Creek than in Sturgeon River, likely due to agricultural activities.
- Sturgeon River nutrient levels are within historical levels and are comparable to upstream concentrations.
- There is a slight decline in phosphorus levels in the Sturgeon River, likely due to the City's careful management of storm water runoff. Phosphorus is typically the main reason for excess plant and algal growth in surface waters.

Chloride

- Increasing chloride levels in Carrot Creek are likely due to road salts. The City is continually looking at ways to reduce the volume of road salt used, focusing on best management practices and new materials.
- There is an upward trend in chloride concentrations in two locations along the Sturgeon River, both of which are next to major roads; however, levels are still well below guidelines for the protection of aquatic life.
- Chloride levels in 2017 are higher in the fall than they are during spring runoff events, which is the opposite of what we would expect. Further investigation into the increase that takes place in the fall is required.

The water levels and flow rate of the Sturgeon River fluctuate greatly from season to season, and even from year to year. This fluctuation has a large impact on water testing results.

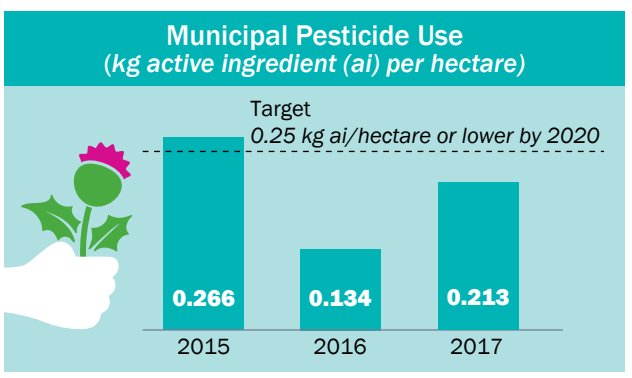
Big Lake is an important filter that improves the quality of the water entering the Sturgeon River, and the City's oil and grit separator program helps to clean the City's storm water before it enters the river.

Nutrient Sources

Fertilizer is often a source of nitrogen and phosphorus, so the surface water runoff from homes, businesses, and agricultural fields can contribute to high nutrient levels, which leads to excess aquatic plant growth and low oxygen levels. As well, the soils around Carrot Creek and the Sturgeon River are naturally nutrient rich.

Reduce Pesticide Use

For more than 30 years, the City has not used pesticides for cosmetic purposes, such as getting rid of dandelions or clover in parks. However, provincial legislation requires us to take action on invasive plant species, such as creeping thistle and common burdoch. When treating these species, the amount of pesticides used varies depending on the weather, the types of weeds or pests, and the management techniques used.



In 2017, municipal pesticide use increased due to the spraying of sports fields, but is still under our target amount.

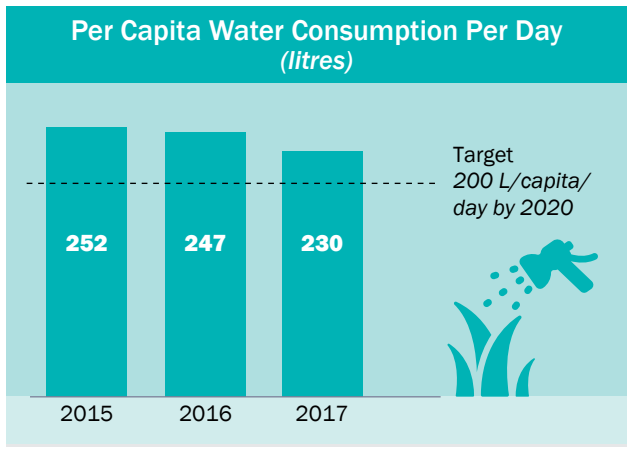
REDUCE WATER CONSUMPTION

For the past three years, we have seen a downward trend in water consumption — with a particularly significant drop between 2016 and 2017 due to a wet spring and summer. Because we didn't need to water our lawns, water consumption was significantly impacted.

By 2020, we would like St. Albert's per capita water consumption to be 200 litres per person per day. That's quite a bit less than last year, which was our best year yet.

Here are some tips that will help you reach the 200 litres per day target:

- Only run the dishwasher when it is full
- Take shorter showers
- Find and fix leaky faucets
- Water your lawn at night and at dawn
- Leave grass clippings on the lawn
- Water your lawn no more than twice a week
- Collect rain water in barrels and use this to water your lawn and gardens



DIY Water Conservation

When you sign out the Home Energy Audit Toolkit from the St. Albert library, you are given the tools and instructions you need to fix leaks, test water flow, and reduce the amount of energy being used to heat your hot water tank.

A perfect weekend task for do-it-yourselfers!

Barreling Along

In 2006, the City began to provide access to low-cost rain barrels. When rain water is collected and used for gardening and landscaping, consumption of tap water is significantly lowered. Since the program started, residents have purchased more than 5,000 rain barrels.

Purchase your rain barrel today! Visit **stalbert.ca** and search **Rain Barrels**.

New Water Meters

In late 2017, the City launched the residential water meter replacement program. By March 2019, every home in St. Albert will have the new technology installed. These meters will help you monitor water usage, provide real-time leak alerts, and notify you when large amounts of water are being consumed.

To learn more and to find out when your neighbourhood is scheduled for water meter replacement, visit **stalbert.ca** and search **Water Meter Replacement Program**.

PEOPLE

GOAL 9

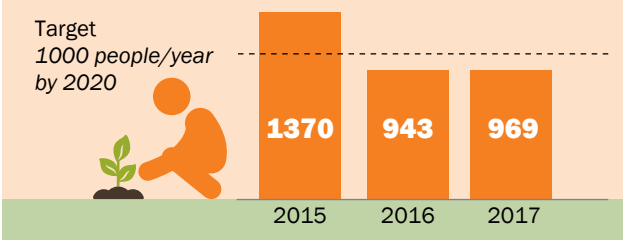
FOSTER COMMUNITY ENVIRONMENTAL STEWARDSHIP

Come out, get involved, lend a hand. We all have a role to play in protecting the environment and taking care of the world around us. When we work together, we can reach the goals and targets set out in the Environmental Master Plan.

ENVIRONMENTAL INITIATIVES GRANT INFORMATION SESSION

Wednesday
September 5, 2018
5:00 p.m. – 6:30 p.m.
West Boardroom
(City Hall)
5 St. Anne Street
St. Albert

Participation in Environment Activities



St. Albert residents have shown a terrific commitment to activities that focus on the environment, like Arbor Day and Clean and Green RiverFest. We look forward to seeing you at more events in 2018!

Birthday Celebration

The Environmental Initiatives Grant Program (EIGP) turned ten in 2017! The EIPG, which funds community-led environmental projects in St. Albert, has awarded 116 grants since it was launched in 2007. Award recipients were invited to join City Council, Environmental Advisory Committee members and staff, in early 2018 to celebrate the success of this program.

Learn more by visiting **stalbert.ca** and searching **Environmental Initiatives Grant Program**.

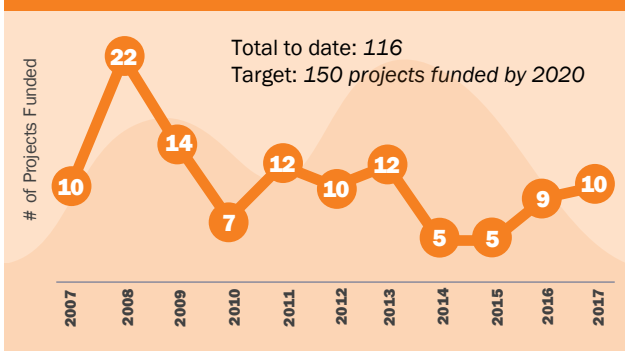
Grant Proposal Support

In 2017, eight people attended an Environmental Initiatives Grant Program information session, where they learned about the program, brainstormed project ideas, and worked on their applications. Of the participants who submitted applications, 75% received an Environmental Initiatives Grant!

Some of the terrific community projects funded in 2017 include a tool-sharing library and fix-it café, an Energy Literacy Awareness campaign (led by Bellerose Composite High School), and a program that encourages families to go on nature walks.

If you have an idea for an environment-focused project, we'd love to see you at the fall 2018 info session.

Number of Environmental Initiatives Grant Program Projects Funded



We Want to Hear from You

It's time to review and update the Environmental Master Plan (EMP) and we'd like to hear from you. In 2009, the first City of St. Albert Environmental Master Plan was approved. At that time, it was agreed that the plan should be reviewed and updated every five years, with input from the Environmental Advisory Committee and the general public. The next updated version will be approved in late 2019, which means we want to start gathering your ideas now. Public consultation will take place in 2018 and 2019, with Council approval taking place in November 2019.

You can share your ideas in three ways:
1. Complete the online survey
2. Look for us at community events, such as the Spring Lifestyle Expo and TD Clean and Green RiverFest
3. Attend public forums in November 2018.

For more project details, dates, and survey link, visit **stalbert.ca** and search **EMP Review**.

GET INVOLVED

Event Name	Date	Website
PARTNERS IN PARKS PROGRAM	April–October	Search this program at **stalbert.ca**
NEIGHBORHOOD CLEAN UPS	April–October	Search this event at **stalbert.ca**
COMPOST GIVEAWAY	Available May & October	**stalbert.ca/waste**
RAIN BARREL SALE	May 5 (L.B.H. TIMBER MART)	**stalbert.ca/rain-barrel-program**
TD CLEAN AND GREEN RIVERFEST	May 12	Search this event at **stalbert.ca**
YELLOW FISH ROAD PROGRAM	June–September	Search this event at **stalbert.ca**
ECO-SOLAR HOME TOUR	June 2 & 3	**ecosolar.ca**
CLEAN AIR DAY	June 6	**stalbert.ca/clean-air-day**
CURBSIDE LARGE ITEM PICK-UP	June 18–22 (Zone A households) June 25–29 (Zone B households)	**stalbert.ca/waste**
TAKE IT OR LEAVE IT	June 23	**stalbert.ca/waste**
LARGE ITEM DROP-OFF	July 28 & September 29	**stalbert.ca/waste**
CURBSIDE LARGE ITEM PICK-UP	September 10–14 (Zone A households) September 17–21 (Zone B households)	**stalbert.ca/waste**
CURBSIDE LEAF PICK-UP	October 1–12 & October 29–November 9	**stalbert.ca/waste**
WASTE REDUCTION WEEK	October 15–21	**stalbert.ca/waste**

For more information, visit **stalbert.ca** and search **Events**.

Contact Environment

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St. Albert, AB, T8N 3Z9

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Email:
environment@stalbert.ca

ISO REGISTERED 14001:2004 INFRASTRUCTURE SERVICES