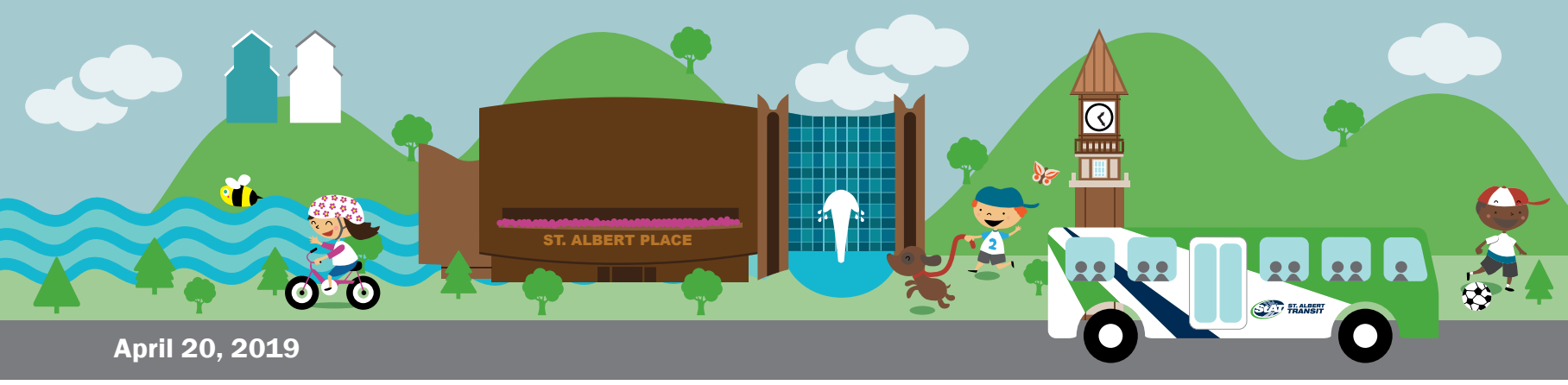


April 20, 2019

2018 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**.

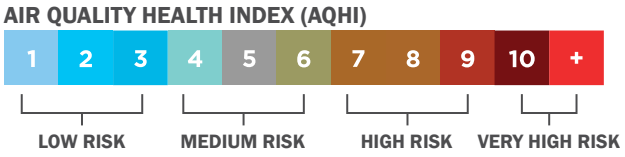
AIR AND ENERGY

GOAL 1

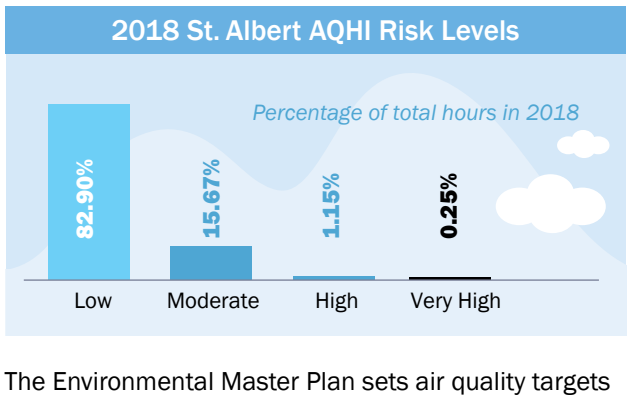
MANAGE AIR QUALITY

St. Albert's Air Quality Monitoring Station, located at Salisbury Park, measures the amount of particulate matter, nitrogen dioxide, and ozone in the air. Air quality can be affected by several factors including traffic, industry, agriculture, wildfires, weather, 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 2018, St. Albert's air quality was in the low-risk to medium-risk rating a majority of the time. High-risk and very-high-risk ratings are associated with winter inversions and smoke from forest fires.



The Environmental Master Plan sets air quality targets at Level 2 triggers, as indicated in the Capital Region Air Quality Management Framework (CRAQMF). The Framework outlines management actions required for four air quality trigger levels. Since the station started collecting data in 2016, nitrogen dioxide and ozone have been at Level 2. Particulate matter requires another set of data to compare to the CRAQMF.

To meet the Environmental Master Plan's target date of establishing an air quality baseline, an additional year of data is required. To view the data from the Air Quality Monitoring Station visit **airdata.alberta.ca**.

After 3 - Be Idle Free

The Idle-Free Bylaw limits idling of parked vehicles to **3 minutes at any time**.



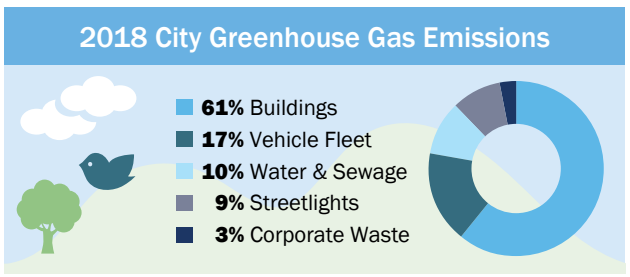
For more information, visit **stalbert.ca** and search **Idle-Free**.

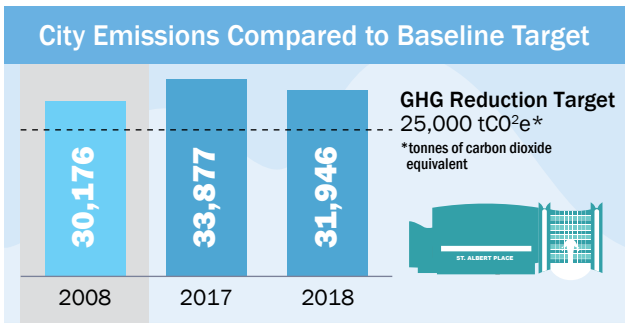
GOAL 2

REDUCE ENERGY CONSUMPTION & GREENHOUSE GAS EMISSIONS

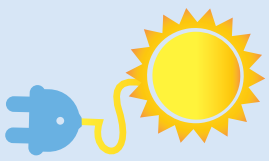
City Greenhouse Gas Emissions

Over the past three years, the City of St. Albert's corporate emissions have declined. In 2018, however, they were approximately six 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.



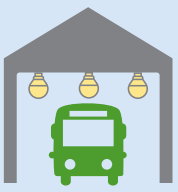


Capturing the Sun



In 2018, the solar panels on the St. Albert Transit building saved over 122 tonnes of GHG emissions, which is equivalent to planting approximately 375 trees.

Lighting up. In 2018, 253 light fixtures were replaced in the Public Works and Transit garages. The new, more efficient Light Emitting Diode (LED) fixtures not only improved the amount and quality of light in the facilities, but provided a 60 per cent savings in energy consumption and costs when compared with the old lighting.



AIR AND ENERGY

Looking to upgrade?



The Alberta Government passed legislation in 2018, now known as the Clean Energy Improvement Program (CEIP), to which St. Albert City Council submitted an Expression of Interest. Under the CEIP, residents will have the opportunity to make affordable energy efficiency upgrades to private property. Repaying the upgrades is facilitated through the municipal property tax system. Program implementation is anticipated in 2020.

Community Greenhouse Gas Emissions

In 2018, community emissions were approximately 15 per cent above 2008 levels. Our target is to reduce emissions to six per cent below 2008 levels by 2020. The chart on the right shows where our emissions originate, with emissions from our homes and transportation being the most significant contributors to greenhouse gas levels.

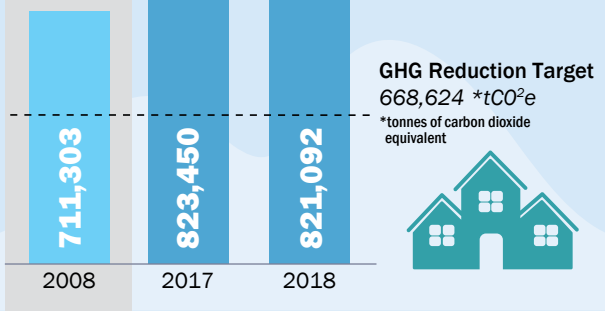
Keep the HEAT Inside. Based on the consistent on-hold list at the St. Albert Public Library, the City developed another **H**ome **E**nergy **A**ssessment **T**oolkit (HEAT). Four toolkits are now available to residents who are interested in completing do-it-yourself home energy and water audits. To help residents implement energy strategies at home, the City also hosted a *Keep the HEAT Inside* energy efficiency information session in 2018, with more sessions planned for future dates.



2018 Community Greenhouse Gas Emissions



Community Emissions Compared to Baseline Target



LAND

GOAL 3

PROMOTE SUSTAINABLE NEIGHBOURHOODS AND TRANSPORTATION CHOICES

St. Albert Transit Recognized



St. Albert Transit (StAT) was recognized by the Canadian Urban Transit Association as a corporate leader for its electric bus project in 2018. The award recognizes transit systems whose service enhances or protects the environment while meeting transit industry demands. StAT has expanded their electric bus fleet to a total of seven since the project started in 2017.

Density Targets

When new St. Albert neighbourhoods are designed, they must meet density targets that reduce urban sprawl, infrastructure costs, and the City's ecological footprint. St. Albert's Municipal Development Plan specifies density targets for new neighbourhoods as set out by the Edmonton Metropolitan Regional Board. In 2018, the City did not approve any new neighbourhoods.

Transit Commuter Ridership

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 (2018) shows that St. Albert grew by 1.11 per cent. In 2018, commuter ridership experienced an insignificant decrease of 0.001 per cent, which is considered stable.

The future Campbell Road Park and Ride Transit Centre, scheduled to start construction in spring 2019, is an important project for St. Albert Transit. The Centre will help facilitate movement between St. Albert, Edmonton, and the rest of the Capital Region. It is also anticipated this project will increase the number of St. Albert residents using commuter bus services.

Garden Suites

In 2018, a significant step was taken toward increasing densities in mature neighbourhoods with the approval of garage or garden suite development in St. Albert back yards. A garden suite is a structure built in the back yard of a single detached home, and it contains its own cooking, washroom, living, and sleeping facilities.

Annual St. Albert Transit Ridership
Number of Commuters



JUNE IS BIKE MONTH

To encourage active living and sustainable transportation choices, the City of St. Albert celebrated Bike Month in 2018 with a FREE bicycle tune-up event. Bikes were lined up along the trail behind City Hall with an overwhelming confirmation that sustainable transportation is important to residents. Look for more opportunities to participate in June 2019.

flourish GROWING TO 100K

Flourish: Growing to 100K will result in a new Municipal Development Plan (MDP) for St. Albert. The MDP is a long-range policy document that will shape how the City grows and develops to a population of 100,000. This Plan was initiated in 2018 and will involve a phased approach, engaging the community in different ways throughout the process. For project timelines and opportunities to provide feedback, visit **stalbert.ca** and search **MDP**.

LAND

GOAL 4

PRESERVE AND MANAGE TREES, PARKS, AND NATURAL AREAS

Urban Forest Management Plan

The City's Urban Forest Management Plan (UFMP) sets 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 modelling program iTree for collecting, storing, and analyzing the urban forest canopy data. Once completed in 2019, the tree inventory data will be used to reassess the City's tree canopy and target.

Actions to enhance St. Albert's tree canopy, including community education initiatives, are outlined in the UFMP. In 2018, 5122 trees and 1.9 acres were planted by community groups and residents through 20 naturalization events. These tree planting events are one way residents can contribute to St. Albert's tree canopy target.

Red Willow Park West
Red Willow Park West will serve as an additional access to Big Lake and Lois Hole Centennial Provincial Park. It will also provide access along Carrot Creek, creating a natural and recreational corridor for residents in the west and north of St. Albert.

Red Willow Park West Master Plan

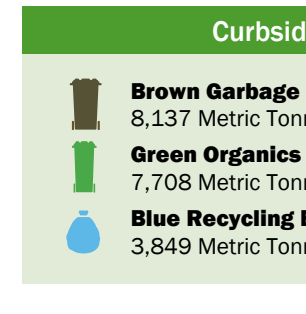
The 2018 Red Willow Park West (RWPW) Master Plan project involved updating the 2003 document to reflect several initiatives that have occurred within the master plan area since 2003. The study area for the RWPW Master Plan focused on the lands directly adjacent to the Sturgeon River and Carrot Creek, and the north and east shores of Big Lake. Development of the concept plans used existing disturbed areas for trails and park destinations, to minimize disturbance of intact natural areas. The plan also proposes opportunities to enhance, expand, and restore smaller natural features within RWPW, such as stands of small trees and clusters of habitat patches as described in the Natural Areas Conservation and Management Plan (2015).

Tree Canopy

Tree canopy refers to the uppermost layer in a forest, formed by the crowns of the trees in an urban forest. The overall canopy consists of private and City trees. Residents can help improve St. Albert's canopy by planting trees on their property.



Beaver Deceivers



City staff have been trained to install 'beaver deceivers' on river stormwater outlets, which will help stop flooding caused by beaver dams. The devices will assist with protecting City infrastructure while still allowing beavers to use the Sturgeon River.

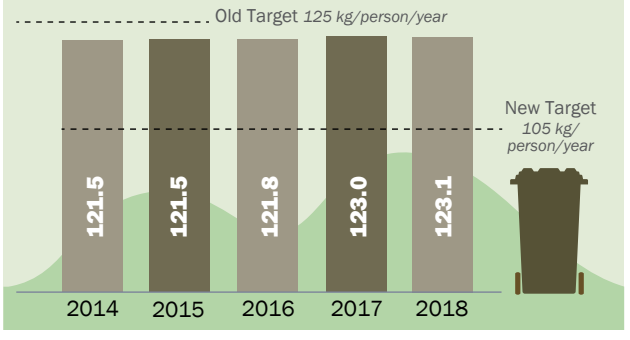
GOAL 5

REDUCE GARBAGE TO THE LANDFILL

How much garbage in a year?

Garbage per capita is calculated by dividing the total amount of residential garbage from the Brown Garbage Carts by the city's total population. Waste that is composted or recycled is not included in the garbage per capita calculation.

Garbage Per Capita *(kg/person/year)*



Curbside Large Item Pick Up

Two Curbside Large Item Pick-Up events were held in 2018. New this year was mattress recycling. Mattresses were collected separately and then dropped off at Evergreen Recycling in Edmonton to be processed. Through manual separation, mattress materials were recycled instead of entering the landfill. Moving forward, one annual Curbside Large Item Pick-Up event will be held in June to allow households to dispose of large items after spring cleaning.

Curbside Waste Education Program

In 2018, the Curbside Waste Education Program ran from July 9 to August 31. The most common error was mis-sorted Blue Recycling Bag items including plastic bags and wrappers, shredded paper, and paper towels and tissues. Plastic bags and wrappers should go in the garbage, and shredded paper, paper towels, and tissues can go in the organics.

Curbside Waste Education Program Awarded



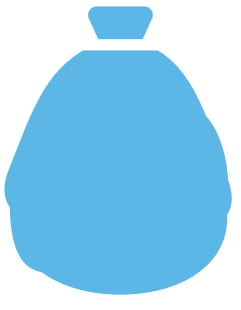
In 2018, the City was awarded the **bronze designation** by the Solid Waste Association of North America (SWANA) in the Education category for its Curbside Waste Education Program. The awards recognize waste programs that show leadership in environmentally sound practices. The Curbside Waste Education Team visited 3,506 households on 160 streets and awarded 339 "You're Waste Wise!" stickers.

Waste Diversion

Diversion is when waste does not go to the landfill, but instead goes into the Green Organics Cart to be turned into nutrient-rich compost or into the Blue Recycling Bag to be recycled into new materials. Electronics collected at the Mike Mitchell Recycling Depot is also included in our diversion rate. In 2018, St. Albert's waste diversion rate was 60%. Our goal is to be diverting 75% by 2020.

Curbside Collection

Blue Recycling Bag Changes



Due to new global restrictions on recycled material, municipalities are adapting to the changing market for recyclables. Common items such as glass bottles and jars, single serve "to-go" coffee cups, and clamshells are no longer accepted in the Blue Recycling Bag. Material that can no longer be recycled should be placed in the Brown Garbage Cart or the Green Organics Cart, depending on the item. Glass bottles and jars are still accepted at the Mike Mitchell Recycling Depot.

Staff were also available to conduct site visits to help residents learn about the recycling changes and provide them feedback to re-sort their bag.

LAND

Reaching Residents

2,728 people at information booths hosted by Waste and Diversion staff

1,725 people at school and community presentations by Waste and Diversion staff

534 people at drop-off events and tours of the Mike Mitchell Recycling Depot



Waste Drop Off

At the City's Mike Mitchell Recycling Depot, residents can dispose of acceptable items including cardboard, newspaper, tin cans, paint, hazardous waste, electronics, and tires. It is important to dispose of hazardous waste 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

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

ELECTRONICS

97 — Electronics *(metric tonnes)*

TIRES

1 — Bicycle *(full cages)*

21 — Automotive *(full cages)*

LEAF & YARD WASTE

2,258 — Leaf & Yard Waste *(metric tonnes)*

HAZARDOUS WASTE

128,100 — Paint *(litres)*

7,322 — Aerosal Paint *(cans)*

8,468 — Aerosol (Other) *(cans)*

69,500 — Hazardous Waste *(litres)*

28,110 — Oil *(litres)*

5,490 — Fluorescent & LED Bulbs *(kilograms)*

1,060 — Auto Batteries *(units)*

6,813 — Dry Cell Batteries *(kilograms)*

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

WATER

GOAL 6

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 that form the alliance.

Did you know?

The Sturgeon River Watershed is named after the Lake Sturgeon, a fish that is typically found in the North Saskatchewan River but historically travelled up the Sturgeon River to feed.

Filling the Data Gaps

Four of five technical studies underway in 2017 were completed in 2018. These studies will fill data gaps focused on land use, water quantity, water quality, and the ecological health of the Sturgeon River Watershed.

The natural areas mapping, and modelling study identifies areas for restoration and conservation that could improve flood and drought resiliency in the watershed. This study was funded through a $100,000 grant from the provincial Watershed Restoration and Resiliency Program.

With $350,000 in funding from an Alberta Community Partnerships Grant, three major technical studies were completed in 2018: the Riparian Condition Assessment, the Aquatic Ecosystem Health Assessment, and the Watercourse Crossing Assessment. One policy study is left to be completed in 2019.

Watershed Management Plan

The information from these studies will contribute to the development of an integrated watershed management plan for the Sturgeon River watershed. Initiated in 2018, the watershed management plan will identify strategies and actions to ensure the future health of the Sturgeon River watershed. The development of the plan will be completed with input and feedback from residents and stakeholders living and working in the watershed.

GOAL 7

IMPROVE WATER QUALITY IN THE STURGEON RIVER

The City developed the River Water Quality Index (RWQI), in consultation with Alberta Environment and Parks, as a tool to help understand water quality in the Sturgeon River.

The parameters that indicate the health of the Sturgeon River are:

- **Total phosphorus & total nitrogen** – these nutrients are used as general indicators of ecosystem health and landscape influences; sources of excess nutrients include fertilizers and manure
- **Chlorides** – used to determine the impact of road salt application
- **Total suspended solids** – used as an indicator of sedimentation and erosion
- ***E. coli*** – a measure of whether the water is safe for recreation or irrigation, and an indication of fecal contamination from urban areas (e.g., dog feces) or agriculture (e.g., manure)

Each year, water quality is tested at six locations on the Sturgeon River and four locations on Carrot Creek. The RWQI measures levels of chloride and *E. coli* against existing provincial guidelines. No provincial guidelines exist for nutrients and total suspended solids, so the index compares measurements to historical data.

WATER

GOAL 7

IMPROVE WATER QUALITY IN THE STURGEON RIVER

Please see the chart below as to where the Sturgeon River has landed on the index.

Overall, within St. Albert's boundaries, chloride and *E. coli* levels are well below provincial water quality guidelines. Nutrient levels (total phosphorus and total nitrogen) are high, but remain consistent with historical levels and are not unusual for a small prairie river system such as the Sturgeon River.

Impact on the River Water Quality Index

Parameters between seasons and years fluctuate, depending on climate and water levels. This has an impact on the River Water Quality Index.

Sturgeon River Water Quality Index

Parameter	2011	2012	2013	2014	2015	2016	2017	2018
Total Nitrogen	Good	Good	Excellent	Excellent	Excellent	Excellent	Good	Good
Total Phosphorus	Good	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Total Suspended Solids	Good	Excellent	Good	Excellent	Good	Excellent	Good	Excellent
Chloride	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
E. coli	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Legend	
Excellent	Excellent
Good	Good
Fair	Fair
Poor	Poor
Pass	Pass
Fail	Fail

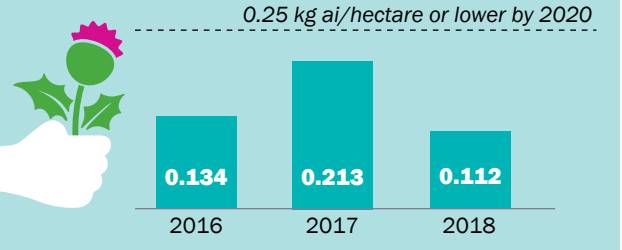


Reduce Pesticide Use

Provincial legislation requires the City to take action on invasive weeds. When treating these weeds, the amount of pesticides used varies depending on the weather, the types of species or pests, and the management techniques used. The City does not use pesticides for cosmetic purposes, such as controlling dandelions or clover.

In 2018, invasive weed control focused on flowering rush, burdock, and garlic mustard, which were removed through a combination of hand pulling and steam treatment. As a result, municipal pesticide use decreased this year and has remained under our target for the last two years.

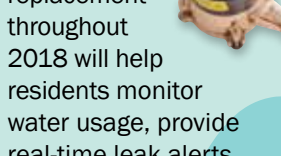
Municipal Pesticide Use
(kg active ingredient (ai) per hectare)



We All Have a Role

We all have a role to play in helping maintain the health of the Sturgeon River. Residents can help by avoiding over-application of fertilizers (or by using compost), picking up after their pets, and disposing of hazardous materials properly by dropping them off at the Mike Mitchell Recycling Facility or an Edmonton Eco Station.

Don't Let It Loose!



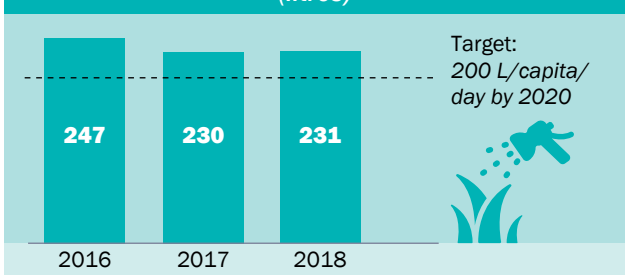
In collaboration with Alberta Environment and Parks (AEP), the City's goldfish removal program was completed in 2017 and 2018. These invasive fish threaten the natural aquatic ecosystem in the Sturgeon River. The program removed an estimated 45,000 fish from both the Ted Hole and the Edgewater stormwater management facilities, as well as several hundred fish totaling 120 kg from Lacombe Lake Park. The City continues to monitor for the presence of invasive fish in St. Albert water bodies.

GOAL 8

REDUCE WATER CONSUMPTION

The downward trend in water consumption over the past three years leveled off in 2018 due to new water customers in the commercial, industrial, and institutional (ICI) sector. Because water consumption is determined using total use (residential and ICI) and the population of St. Albert (residents), the impact on St. Albert's water consumption was minor.

Per Capita Water Consumption Per Day
(litres)





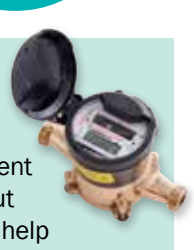
Water Conservation Bylaw

In 2018, the Water Conservation Bylaw came into effect to help promote the efficient use of water and reduce water waste. Details of the new bylaw include:

- From May 1 to October 1, outdoor daytime sprinkler use is permitted between the hours of 7:00 p.m. and 9:00 a.m.
- Installation of water-efficient fixtures is required for new construction and major renovations.

It is anticipated that this bylaw will help us reach our water consumption target of 200L water/person/day.

Water Meter Technology



Water meter replacement throughout 2018 will help residents monitor water usage, provide real-time leak alerts, and notify when a large amount of water is being consumed.

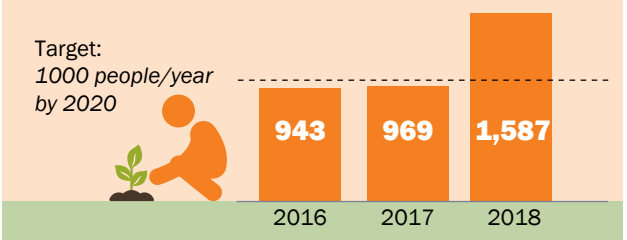
PEOPLE

GOAL 9

FOSTER COMMUNITY ENVIRONMENTAL STEWARDSHIP

St. Albert residents have shown outstanding commitment to environmental activities, such as Arbor Day and Clean and Green RiverFest. In 2018, participation in environment activities increased 63 per cent from 2017, marking the highest involvement yet!

Participation in Environment Activities



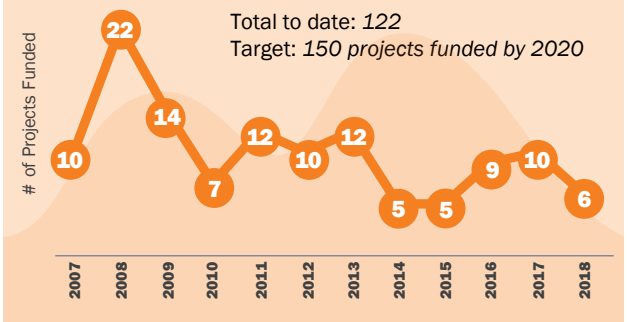
Record participation is a result of the overwhelming enthusiasm of residents and community groups to plant trees and shrubs in natural areas throughout St. Albert. An additional Arbor Day event provided the opportunity for all St. Albert grade 1 students to participate which also helped us reach our target. Way to go St. Albert!

10-year Anniversary

The 10-year anniversary of the Environmental Initiatives Grant Program was commemorated in 2018. Attendees of the celebration had the opportunity to review projects over the years, hear presentations from two past grant recipients, and network with potential project partners in the community.

The EIG, which funds community-led environmental projects in St. Albert, has awarded 122 grants since it was launched in 2007. To learn more, visit stalbert.ca and search Environmental Initiatives Grant Program.

Number of Environmental Initiatives Grant Program Projects Funded



Application Support

In 2018, two community groups and one school attended an Environmental Initiatives Grant Program information session, where they learned about the program, brainstormed project ideas, and worked on their applications. If you have an idea for an environment-focused project, we'd love to see you at the 2019 info session.

ENVIRONMENTAL INITIATIVES GRANT INFORMATION SESSION

Wednesday, August 28, 2019
5:00 p.m. – 6:30 p.m.
CPS Boardroom (City Hall)
5 St. Anne Street
St. Albert

GET INVOLVED

Event Name	Date	Website
PARTNERS IN PARKS PROGRAM	April–October	Search this program at **stalbert.ca**
NEIGHBOURHOOD CLEAN UPS	Year Round	Search this program at **stalbert.ca**
COMPOST GIVEAWAY	Available May & October	**stalbert.ca/waste**
RAIN BARREL SALE	May 4 (L.B.H. Timber Mart)	**stalbert.ca/rain-barrel-program**
CLEAN AND GREEN RIVERFEST	May 11	Search this event at **stalbert.ca**
YELLOW FISH ROAD PROGRAM	May–October	Search this program at **stalbert.ca**
ECO-SOLAR HOME TOUR	June 1 & 2	**ecosolar.ca**
CLEAN AIR DAY	June 5	**stalbert.ca/clean-air-day**
BIKE MONTH	Month of June	Search this event at **stalbert.ca**
CURBSIDE LARGE ITEM PICK-UP	June 17–21 (Zone A households) June 24–28 (Zone B households)	**stalbert.ca/waste**
TAKE IT OR LEAVE IT	June 15	**stalbert.ca/waste**
LARGE ITEM DROP-OFF	July 27 & September 14	**stalbert.ca/waste**
CURBSIDE LEAF PICK-UP	September 30–October 11 & October 28–November 8	**stalbert.ca/waste**
WASTE REDUCTION WEEK	October 21–27	**stalbert.ca/waste**

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

Contact Environment

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St. Albert, AB, T8N 3Z9

Phone:
780-459-1735
Email:
environment@stalbert.ca