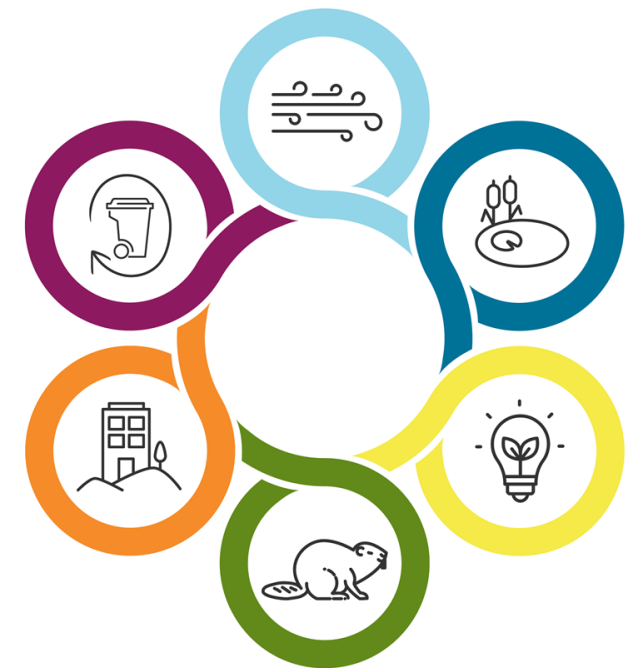
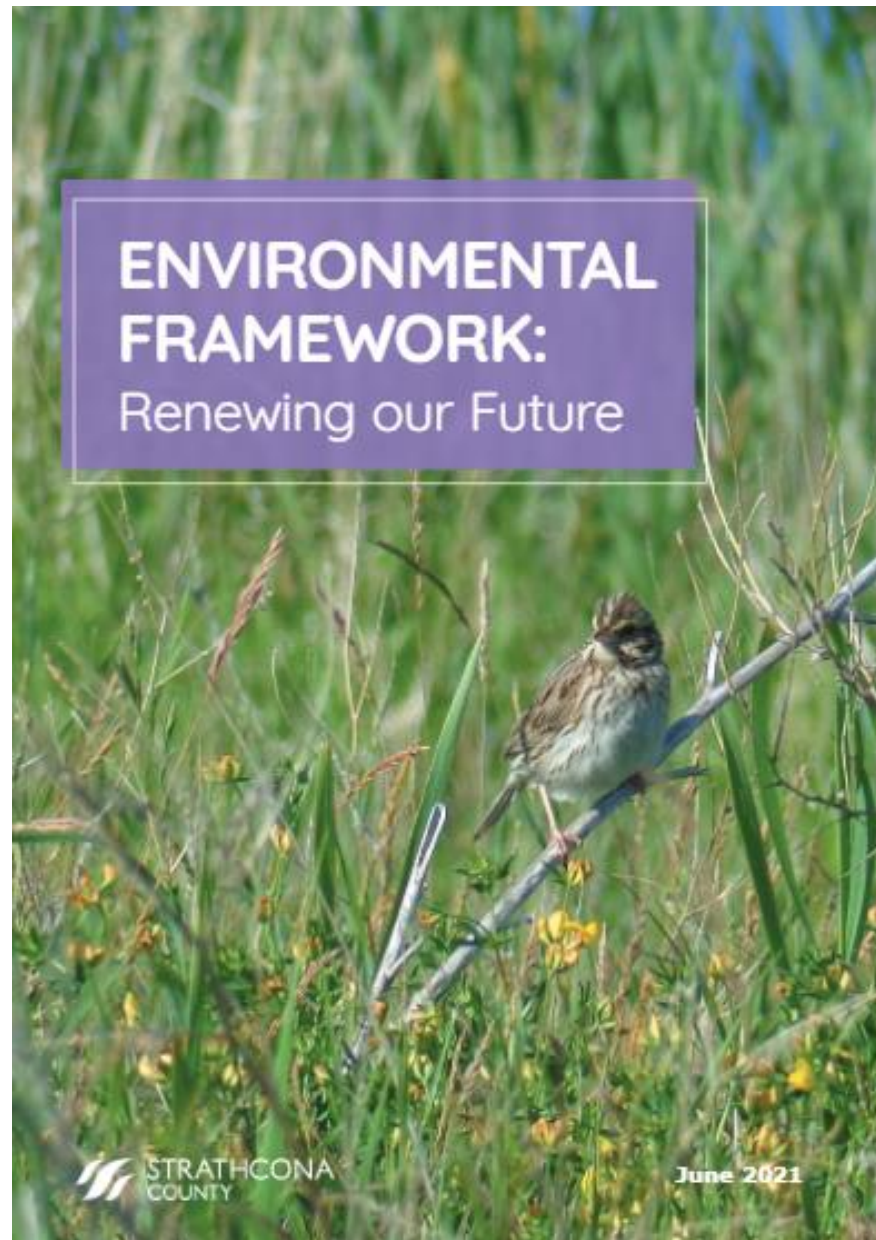


# Environmental Framework 2023 Year in Review

Jocelyn Thrasher-Haug, Manager, Agriculture & Environment  
Planning & Development Services  
April 16, 2024



# 2021 Environmental Framework



## Reflecting & informing

- ❖ Ecosystem model
- ❖ Global growth
- ❖ Persistent issues

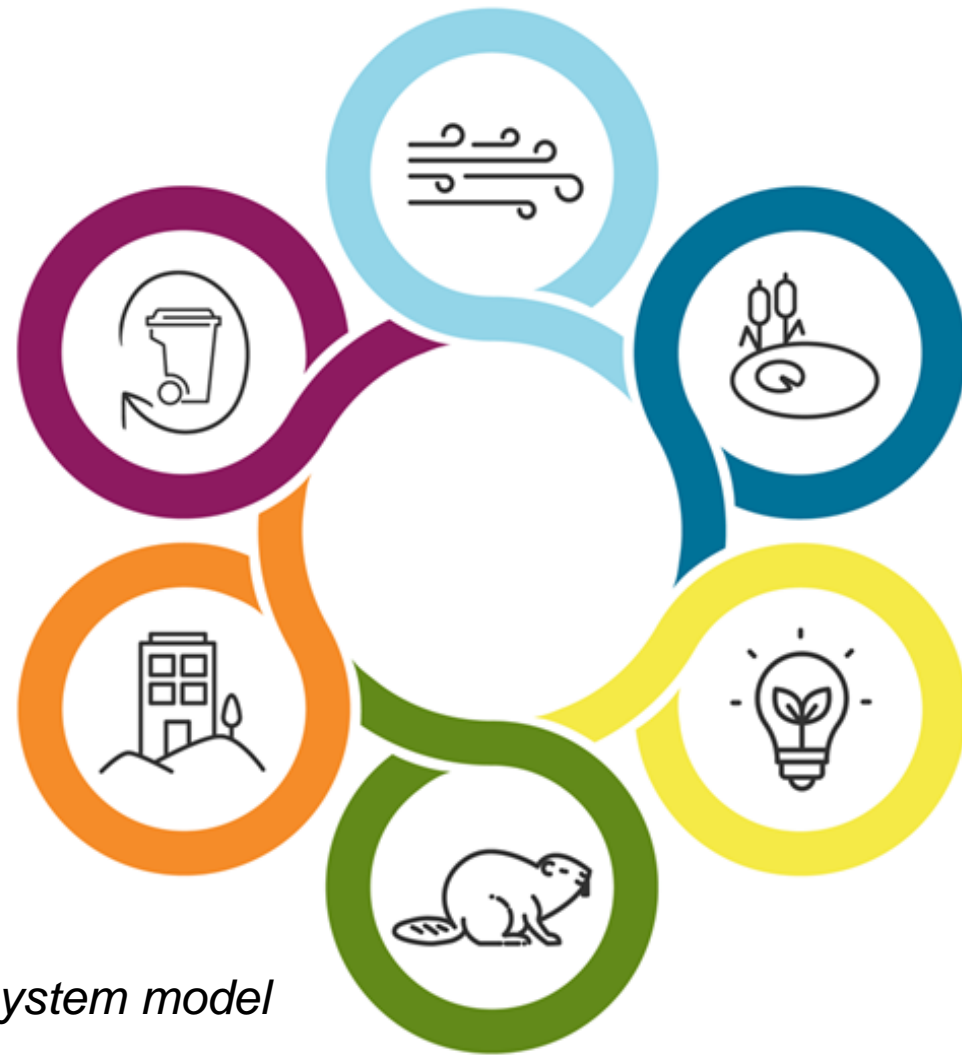
## Reframing our focus

- ❖ Air, Water, Land, Biodiversity, Waste, Energy

## Renewing our future

- ❖ Implementation

# Renewing our future



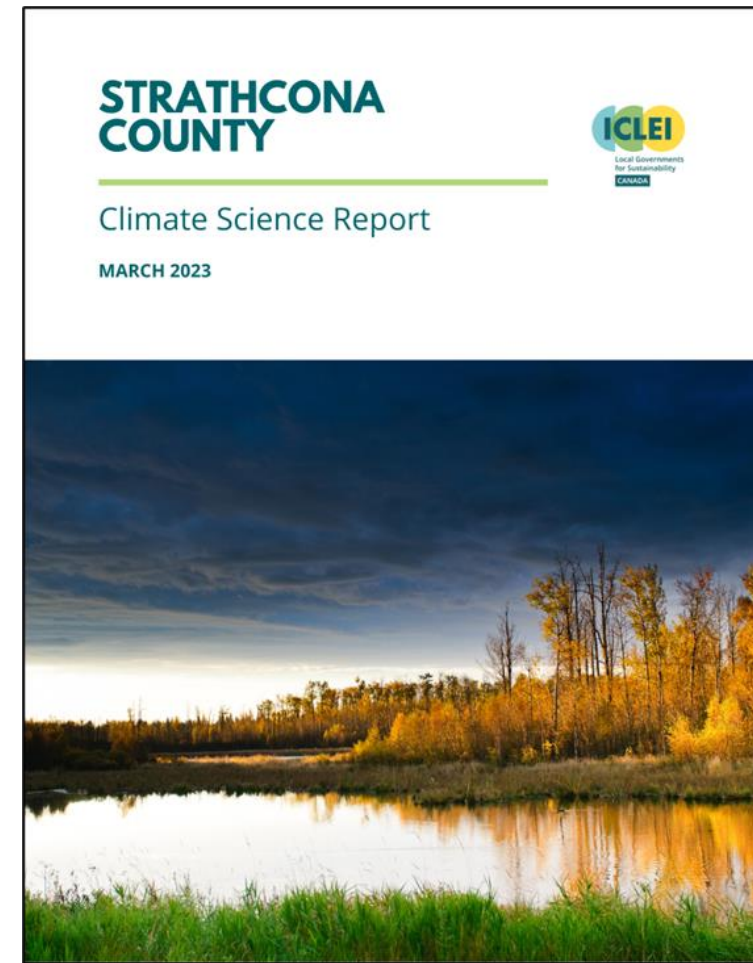
*Ecosystem model*

Six outcomes and 35 objectives create a common reference for collaboration and alignment between stakeholders to work together towards a future where healthy ecosystems support a healthy community



# Telling our story

- Innovative practices in action
- Supportive tools in action
- Strategic initiatives to consider





# 2021

## Environmental Framework

### Year-in-Review

Ecosystems are the complex of relationships between living organisms and their physical environment. The ecosystem model can also define relationships across County departments, external agencies and our citizens, working together for a healthy community.



#### Reframing our focus.

**6** outcomes & **35** objectives

To work together towards a future where healthy ecosystems support a healthy community.



#### Telling our story



180 Innovative practices in action

130 Supportive tools in action

250+ Strategic initiatives to consider

#### Renewing our future.



**Air**

Alberta Capital Airshed Clean Air Awards  
Alberta Zero Emission Hydrogen Transit Bus purchase  
Annual Tree Planting Program



**Water**

Astotin Creek Resiliency Study  
Headwaters Protection Strategy  
Wetland Replacement Program



**Land**

Conservation Reserve Directive  
Edmonton – Strathcona County Footbridge  
Contaminated Site Action Plans  
Designated Industrial Zone (DIZ) Pilot Project

Waste Management Roadmap  
Circular Cities Project  
Regional Solid Waste Collaborative

**Waste**



**Biodiversity**

Bird Friendly Cities  
Bird Watching Kits  
Best Management Practices for SWMFs update  
Open Space naturalization  
Problem Wildlife Program



**Energy**

Green Fleet Procedure  
Electric Vehicle Feasibility Study  
Canada's Greener Homes Grant  
Clean Energy Improvement Program (CEIP)  
Greenhouse Gas Emission Target

#### Environmental Framework Integration Team

**32 participants & 11 departments**

Are represented on the EFIT, the majority who were integral to the development of the Framework and chose to continue their involvement!



Thank you for helping Strathcona County in our commitment to environmental action and responsibility.

[strathcona.ca/environmentalframework](https://strathcona.ca/environmentalframework)



# 2022

## Environmental Framework

### Year-in-Review

#### Our focus, reframed.

The Environmental Framework follows the ecosystem model, focusing on physical (air, water, land) and living organism (biodiversity) outcomes with energy and waste outcomes. The ecosystem model also helps define relationships across County departments, external agencies and our citizens, working together for a healthy community.



#### Environmental Framework Integration Team

##### 32 participants & 11 departments

Are represented on the EFIT and participate in quarterly meetings to share knowledge, report on progress, and discuss EF implementation challenges and opportunities.



#### Telling our story



180 Innovative practices in action

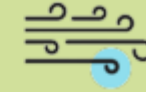
130 Supportive tools in action

250+ Strategic initiatives to consider

#### Renewing our future.

##### Air

Zero Emission Hydrogen Bus Pilot  
EV Chargers in Strathcona County  
Annual tree planting program  
Alberta Capital Airshed network expansion



##### Water

Astotin Creek Resiliency Study  
Wetland Replacement Program  
SWMF Water Quality Monitoring  
SWMF Naturalization



##### Land

Edmonton-Strathcona County Footbridge  
Designated Industrial Zone (DIZ) Pilot Project  
Beaver Hills Biodiversity Trail Tour (FCM)  
Responsible Livestock Ownership Bylaw



##### Waste

Waste Management Roadmap  
Circular Cities Project  
Salt Management Plan  
Love Food Hate Waste campaign  
Circular Economy Summit



##### Biodiversity

Bird Friendly Cities  
Bird Watching Kits  
Bird surveys  
Human-Wildlife Coexistence Advisory Committee  
Problem Wildlife Program  
Invasive Species Program  
Biodiversity Assessments



##### Energy

Clean Energy Improvement Program and Bylaw  
Climate Resilience Plan Grant  
EMRB regional Climate Resilience and Vulnerability Assessment project  
Millenium Place Solar Installation



Thank you for helping Strathcona County in our commitment to environmental action and responsibility.

[strathcona.ca/environmentalframework](https://strathcona.ca/environmentalframework)





#### OBJECTIVE A1:

Monitor air quality

#### OBJECTIVE A2:

Manage air quality

#### OBJECTIVE A3:

Educate and engage with citizens to encourage stewardship behaviours

#### OBJECTIVE A4:

Reduce emissions, including greenhouse gases, by reducing energy use, committing to energy efficiency, developing and using renewable energy sources

**OUTCOME:** Airshed sustains healthy ecosystems and healthy citizens

### Strategic Initiatives (completed)

- Recipient of Alberta Capital Airshed's 2023 Clean Air Award – Raising Awareness of Air Quality
- Alberta Zero Emission Hydrogen Transit Bus in active service
- Annual Tree Planting Program & Development Tree Planting

ACA AQHI 2023 = 87.8% low, 8.5% moderate, 2.7% high, 0.5% very high

FAP AQHI 2023 = 83.5% low risk on average

#### OBJECTIVE W1:

Monitor water quality

#### OBJECTIVE W2:

Manage water quality

#### OBJECTIVE W3:

Monitor water quantity

#### OBJECTIVE W4:

Manage water quantity

#### OBJECTIVE W5:

Educate and engage with citizens to encourage stewardship behaviours that support water conservation

#### OBJECTIVE W6:

Ensure water supply meets future planning needs

#### OBJECTIVE W7:

Ensure the North Saskatchewan River and its tributaries are protected from pollution



**OUTCOME:** Watershed sustains healthy ecosystems and healthy citizens

### Strategic Initiatives (completed)

- Pond Parties
- Wetland Replacement Program projects: Uncas and Busenius Estates
- Stormwater Management Facility monitoring and naturalization
- Stormwater Management Facility aquatic colorant project



**OBJECTIVE L1:**

Land use planning focuses on environmental (smart growth/complete) community design

**OBJECTIVE L2:**

Land use development focuses on wise use and development of land and buildings

**OBJECTIVE L3:**

Land management builds on ecosystem resilience and includes conservation and restoration

**OBJECTIVE L4:**

North Saskatchewan River valley planning, use and management builds on ecosystem resilience and includes conservation and restoration

**OBJECTIVE L5:**

Agricultural land planning, use and management builds on ecosystem resilience and conservation

**OBJECTIVE L6:**

Remediate and reclaim degraded public lands

**OBJECTIVE L7:**

Prevent pollution and reduce the use of harmful substances on public and private land

**OBJECTIVE L8:**

Prevent light pollution and reduce the use of artificial light on public and private land

**OBJECTIVE L9:**

Educate and engage with citizens to encourage stewardship behaviours that support appropriate planning, use, and management of public and private land



**OUTCOME:** Land planning, use, and management sustains healthy ecosystems and healthy citizens

## Strategic Initiatives (completed)

- Recipient of Canadian Nursery Landscape Association's 2023 Green Cities Award
- Presented Contaminated Site Management Program at two conferences
- Responsible Livestock Ownership Bylaw
- Agriculture & Food Sector Development Strategy
- Agriculture extension revitalization



# Biodiversity



## OBJECTIVE B1:

Plan for a healthy connected ecological network

## OBJECTIVE B2:

Protect a healthy connected ecological network

## OBJECTIVE B3:

Manage a healthy connected ecological network

## OBJECTIVE B4:

Restore degraded habitats

## OBJECTIVE B5:

Educate and engage with citizens to encourage stewardship behaviours that support biodiversity conservation on public and private land

**OUTCOME:** Biodiversity sustains healthy ecosystems and healthy citizens

## Strategic Initiatives (completed)

- Bird Friendly Community Bird Campaign results in the Pileated Woodpecker as our community bird
- Human-Wildlife Coexistence Program
- Human-Wildlife Coexistence Strategy developed with the Beaver Hills Biosphere
- Strategic Invasive Plant Management Program
- Biodiversity Monitoring Program
- Bird Surveys



## Waste



### OBJECTIVE WM1:

Monitor waste collection to ensure healthy ecosystems and healthy citizens

### OBJECTIVE WM2:

Manage waste collection to ensure healthy ecosystems and healthy citizens

### OBJECTIVE WM3:

Reduce waste to ensure healthy ecosystems and healthy citizens

### OBJECTIVE WM4:

Educate and engage with citizens to encourage consumption behaviours that reduce waste

**OUTCOME:** Waste management protects healthy ecosystems and healthy citizens

## Strategic Initiatives (completed)

- Sort and Save results in 1,400 households downsizing waste carts
- Love Food Hate Waste Campaign & Food Action Lab
- TrashFest, Poop-a-Palooza, classroom presentations, tours
- HodgePodge Lodge re-opening results in over 540,000 lbs of material circulated through



#### OBJECTIVE E1:

Reduce energy use within municipal buildings

#### OBJECTIVE E2:

Reduce energy use within municipal operations

#### OBJECTIVE E3:

Increase energy efficiency via land use and transportation planning decisions

#### OBJECTIVE E4:

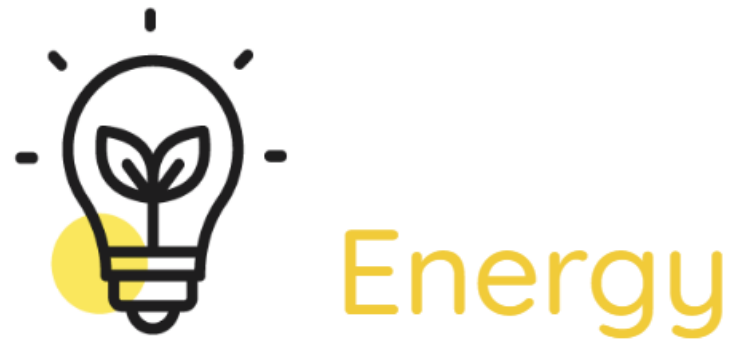
Increase renewable and alternative energy sources (solar, wind, geothermal)

#### OBJECTIVE E5:

Evaluate procurement of goods and services to increase energy efficiency and increase renewable/alternative energy sources

#### OBJECTIVE E6:

Educate and engage with citizens to encourage behaviours that support energy efficiency and the transition to renewable/alternative energy



**OUTCOME:** Reducing energy use, committing to energy efficiency, and embracing renewable energy sources protects healthy ecosystems and healthy citizens

### Strategic Initiatives (completed)

- Clean Energy Improvement Program launch; FCM funding awarded; 46 eligible prequalifications
- MCCAC funding approved
  - Climate Resilience Plan
  - EV chargers in Community Centre
- Edmonton Metropolitan Region Board accepted “From Risk to Resilience”

## Climate change:

Long term shift in the average climatic conditions in a region over a long period of time

Involves both changes in average conditions and changes in variability

Occurs naturally, currently amplified by human activities

## Mitigation

for climate change by conserving energy, transitioning energy, conserving and restoring natural systems

## Adaptation

to climate change by building resiliency - into grey and green infrastructure and communities

# Climate change mitigation & adaptation

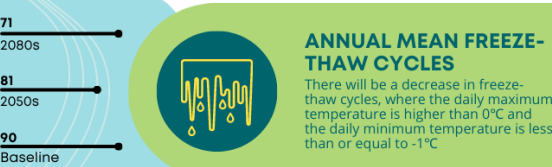
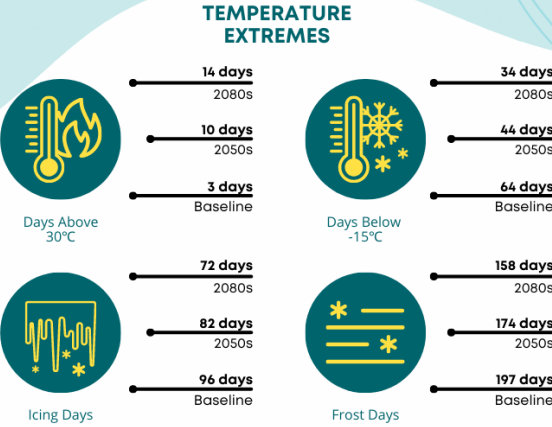
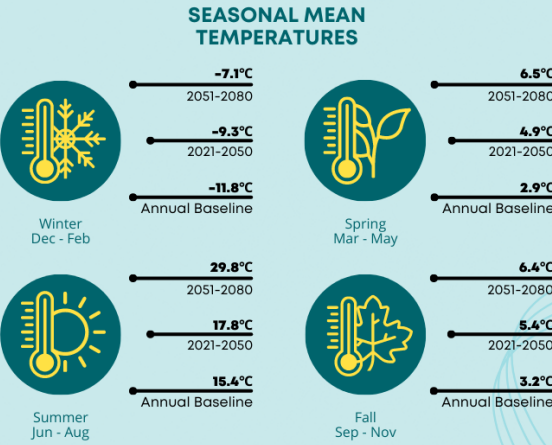


## Municipal Climate Change Action Centre – Climate Resilience Capacity Building Program

- 6 internal engagement workshops held on topics of impact identification, risk assessment (2), action identification, action validation and implementation
- 19 staff engaged from affected groups: PDS, Utilities, RPC, TEO, Finance, FCS, Emergency Services, Transit, FFM, Intergovernmental Affairs, Communications, LLS and Council

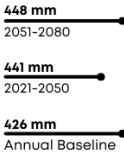
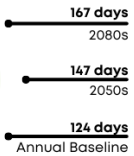


FUTURE CLIMATIC PROJECTIONS  
Strathcona County  
March, 2023

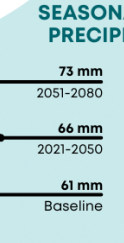


Baseline period: 1971 - 2000  
Sources: Canadian Climate Data and Scenarios Network, Climate Atlas of Canada Tool.

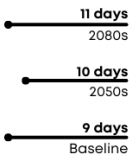
**GROWING SEASONS**  
First frost dates will be later, and last frost days will be earlier.



**ANNUAL MEAN PRECIPITATION**  
Annual precipitation is expected to increase. Winter and Spring are projected to get significantly wetter, with a slight decline in the Summer.



**HEAVY RAINFALL DAYS**  
Days with precipitation over 10 mm and 20 mm are considered Heavy Rainfall days, and are projected to increase. Data indicated is for days over 10 mm.



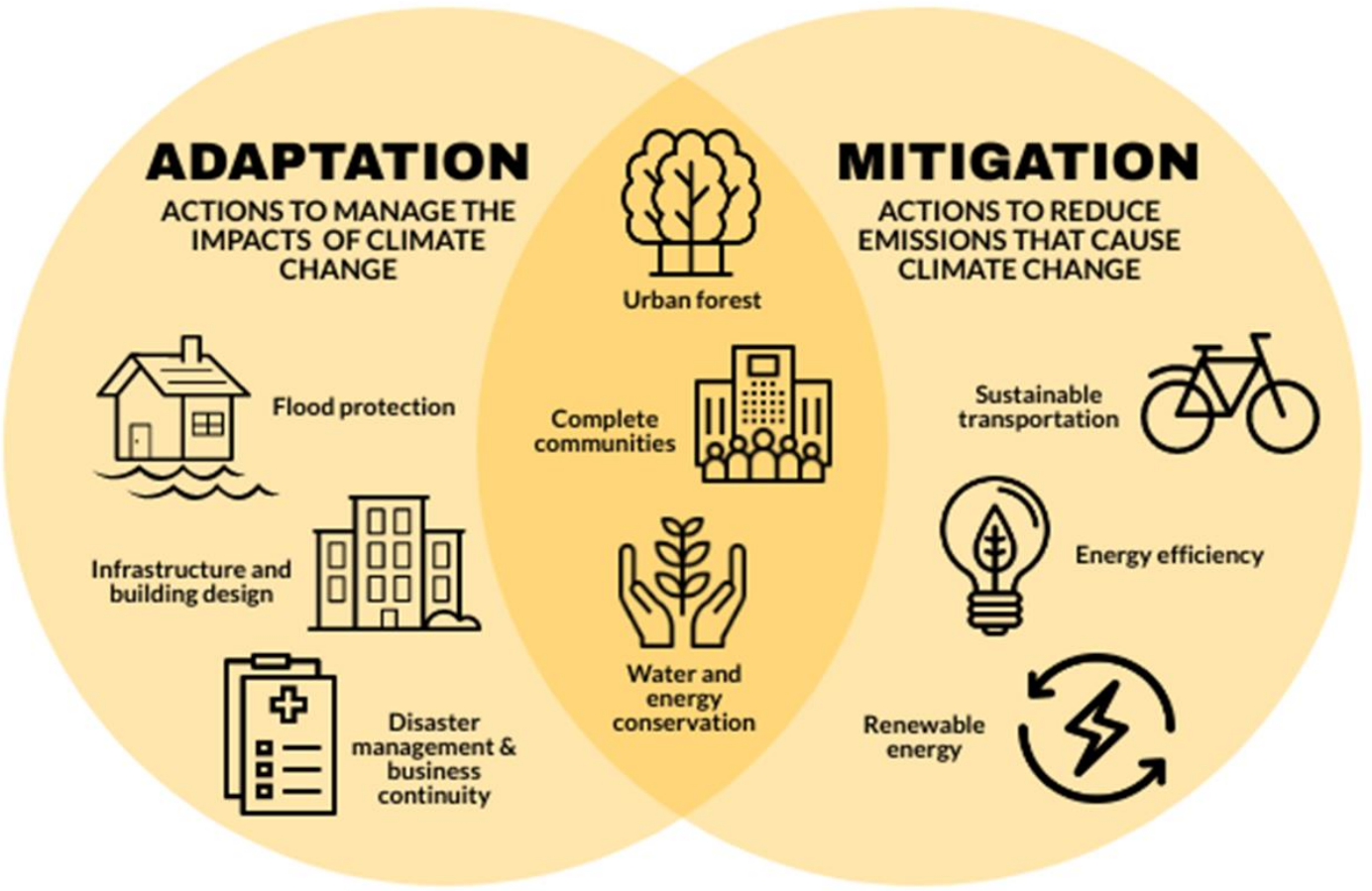
**PRECIPITATION EVENTS**  
Precipitation events in general are projected to become more intense and extreme.

- Frequency**  
Precipitation will fall at a faster rate (mm/h)
- Intensity**  
Shorter storms will have an increasingly high intensity
- Duration**  
Return periods of heavy storm will shorten (increased frequency)



**WILDFIRES**  
Research shows that extreme wildfire risk in Western Canada has increased by a factor of 1.5 to 6 from climate change.  
More large and high-intensity wildfires, such as that experienced in Fort McMurray, are expected under current climate change projections.

- 40 climate change impacts identified affecting the built environment, natural environment and socioeconomic conditions in Strathcona County
- 15 impacts prioritized for action planning
- 36 adaptation actions identified, 11 prioritized for implementation + 2 resilient governance actions for consideration





## Outcomes:

- Shape understanding of regional environmental considerations and improve knowledge and collaboration

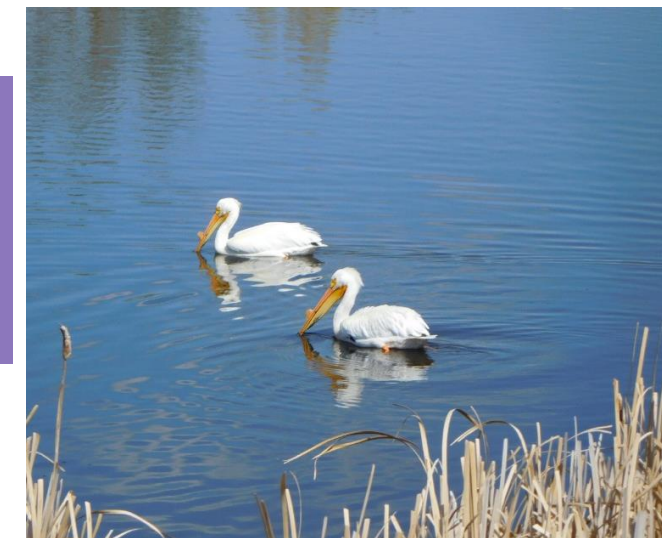
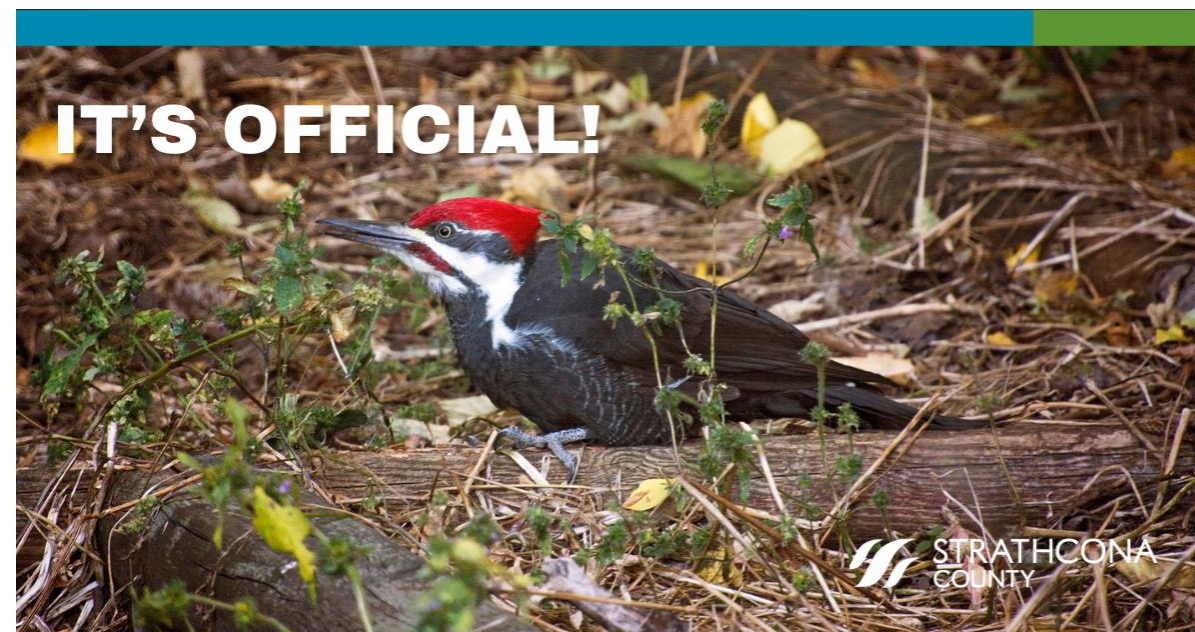
## Objective:

- Increase awareness of environmental issues and their local impacts

## Key Messages:

- Strathcona County is committed to environmental action and responsibility
- We use sound, evidence-based decision-making tools to take environmental action
- We can all take action to address local, regional and global environmental issues

# 2023 Communication



## World Migratory Bird Day

May 13 has been proclaimed as World Migratory Bird Day.

This year's theme is "Water: Sustaining Bird Life." Help us celebrate by attending our event on May 13.

More details at the link below!

[strathcona.ca/birdfriendlycommunity](https://strathcona.ca/birdfriendlycommunity)



## Watch for snakes on roads

Please take care when driving in the County.

Slow down, watch for and avoid snakes on roads.



## Coyotes in the County

As temperatures drop, coyotes may become more active and visible as they search for food.

Visit our webpage to learn more about minimizing your chances of encountering a coyote.

[strathcona.ca/coyotes](https://strathcona.ca/coyotes)







# 2023 Environmental Framework Year-in-Review

## THE ECOSYSTEM MODEL

Ecosystems are the complex of relationships between living organisms and their physical environment. The Environmental Framework follows the ecosystem model, focusing on physical (air, water, land) and living organism (biodiversity) outcomes with energy and waste outcomes. The ecosystem model also helps define relationships across County departments, external agencies and our citizens, working together for a healthy community.



### Our focus, reframed

Approved by Council in June of 2021, the new, updated Environmental Framework has been the foundation for working together towards a future where healthy ecosystems support healthy communities in Strathcona County.

### Telling our story

- 180 innovative practices in action
- 130 supportive tools in action
- 250+ strategic initiatives to consider



## Environmental Framework Integration Team (EFIT)

**34 participants and 10 departments** are represented on the EFIT and participate in quarterly meetings to share knowledge, report on progress, and discuss EF implementation challenges and opportunities.



### Zero Emission Hydrogen Bus

- In active service

### In partnership with Alberta Capital Airshed (ACA) & Fort Air Partnership (FAP)

- Recipient of ACA's 2023 Clean Air Award - Raising Awareness of Air Quality
- ACA network expansion
- ACA Air Quality Health Index 87.8% low risk
- FAP Air Quality Health Index 83.5% low risk

### Annual Tree Planting Program

- 517 trees, 818 shrubs, 6,659 plugs = 768 equivalent trees planted in new developments
- 30 white spruce planted by Salisbury Composite Highschool students
- 91 trees of assorted species planted by Recreation, Parks & Culture
- 1,000 trees planted by Centurion Canada
- 90 trees and shrubs planted by Rotary Club of Sherwood Park



### Community Engagement

- 3 Pond Parties

### Wetland Replacement Program (WRP)

- Plantings completed for two WRP projects near Uncas Elementary and Busenius Estates

### Aquatic Colorant Project

- 2 stormwater management facilities (SWMFs), 2 control SWMFs

### Stormwater Management Facility Water Quality Monitoring

- Spring and fall sampling and analysis completed for 28 SWMFs



### Bird Friendly Community

- Community Bird Campaign recognizes the Pileated Woodpecker as our Community Bird

### Human Wildlife Coexistence Program

- Human Wildlife Coexistence Strategy developed with Beaver Hills Biosphere
- 802 County Connect cases
- 1,457 dam breaches
- Urban coyote surveillance
- Support Government of Alberta and Elk Island National Park with wild boars
- Snake road crossing signs installed

### Strategic Invasive Species Program

- 104 clubroot inspections
- 1,747 km roadside broadcast sprayed
- 636 km roadside spot sprayed
- 1,125 weed inspections
- 532 weed inspection cases
- 259 weed notices issued, 91% compliance
- 87 urban inspections, 85 urban sites under weed management (69% mechanical control, 31% chemical control)
- 130 ha of County Municipal Reserves treated with herbicides
- Monitored grasshopper species to inform provincial crop pest network surveillance

## BIODIVERSITY



### Community Engagement

- 2 World Migratory Bird Days

### Bird Surveys

- 8 surveys across 7 projects

### Biodiversity Monitoring Program

- 14 wildlife cameras deployed

### Biodiversity Assessments

- 4 completed



## ENERGY

### Clean Energy Improvement Program

- Federation of Canadian Municipalities funding awarded
- October launch
- Target of \$1.1 million in financing, 46 eligible prequalifications

### Climate Resilience Plan

- Municipal Climate Change Action Centre funded

### Edmonton Metropolitan Region Board

- From Risk to Resilience project completed

### EV charging in Community Center Parkade

- Municipal Climate Change Action Centre funded



## LAND

### Communities in Bloom

- Recipient of Canadian Nursery Landscape Association's 2023 Green Cities Award

### Contaminated Site Management Program

- Presentations at REMTech & Alberta Society of Professional Biologists conferences

### Responsible Livestock Ownership Bylaw

- 21 customer service cases with a focus on manure and pasture management

### Agriculture & Food Sector Development Strategy

- Phase 1 Situational Analysis completed
- Phase 2 Gathering Input completed

### Agriculture extension revitalization



### Sort and Save

- 1,400 households opted to downsize their waste cart for a savings on their utility bill

### Love Food Hate Waste

- Education and outreach campaign targeting food waste
- Participating in the County's Food Action Lab

### Community Engagement

- Trashfest
- Poop-a-Palooza
- 40 classroom presentations
- 12 HodgePodge Lodge and Broadview Enviro Service classroom tours

### HodgePodge Lodge

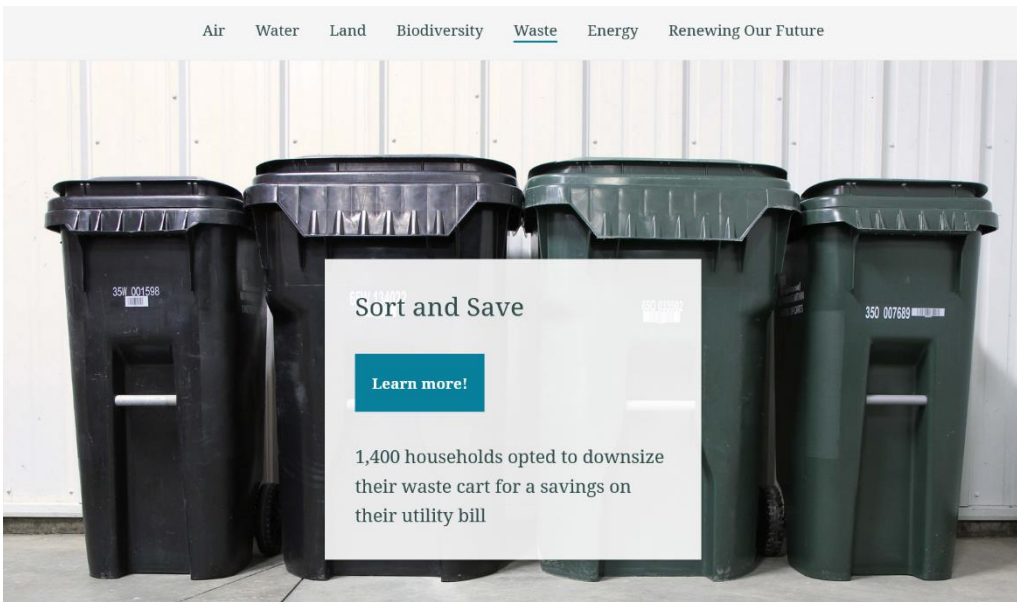
- New Lodge was opened in March to promote reduction and reuse
- Over 540,000 lbs of materials have circulated through the building

## WASTE





# Telling our story – 2023 story map



## Renewing Our Future

We've accomplished much in 2023, and more great initiatives are on the horizon for 2024 and beyond!





# So what? Why tell our story?

---

As an **elected official**...when *questioned*...this is the relevant source that speaks to the organization's commitment to a healthy community

---

As a **citizen**...when *concerned*...this is the relevant source that enables behaviour change to support a healthy community

---

As an **administrator**...when *planning, managing or operating* municipal infrastructure...this is the relevant source that enables decision-making for a healthy community

---

To the greater **region**...when *skeptical* about our collective commitment...this is the relevant source that tells our story!





**Thank you! Questions?**

