



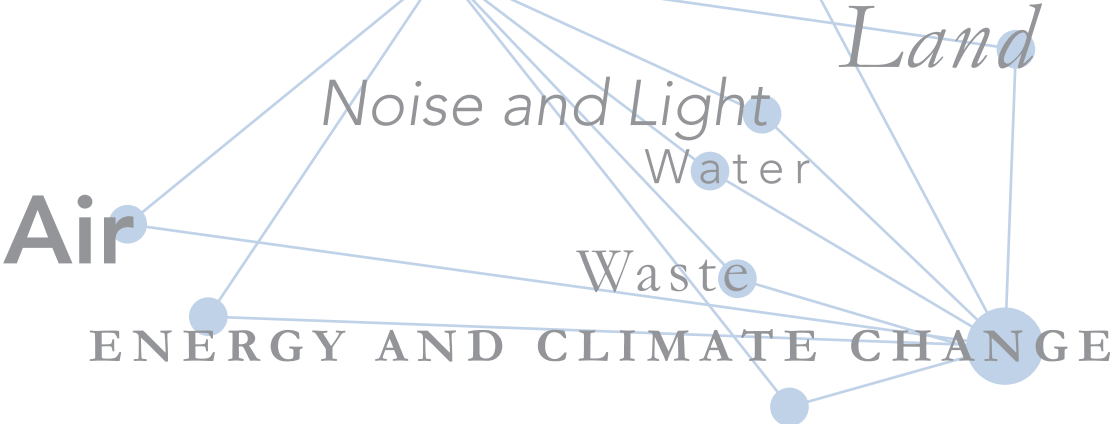
City of Leduc Environmental Plan Phase 1



FEBRUARY 2012

City of Leduc

ENVIRONMENTAL PLAN PHASE 1



NOTE FROM THE MAYOR

The City of Leduc Environmental Plan - Phase 1 represents our community's commitment to protect and enhance our local natural environment. Building from our many actions to date, this Plan outlines our vision, principles and actions to support the achievement of Leduc's environmental objectives.

The Environmental Plan will support the new Municipal Development Plan's environmental vision: "our natural environment is healthy and clean." The Environmental Plan aims to uphold the integrity of our local landscapes, water resources, air quality, energy use practices and waste management efforts.

On behalf of the City of Leduc Council, I assure you that we will work cost effectively and efficiently to support our local environmental outcomes. We will develop educational and outreach resources to support our shared environmental outcomes. Under the Environmental Plan - Phase 1, we will act as both a community leader and a community enabler and our commitment to our community is action today.

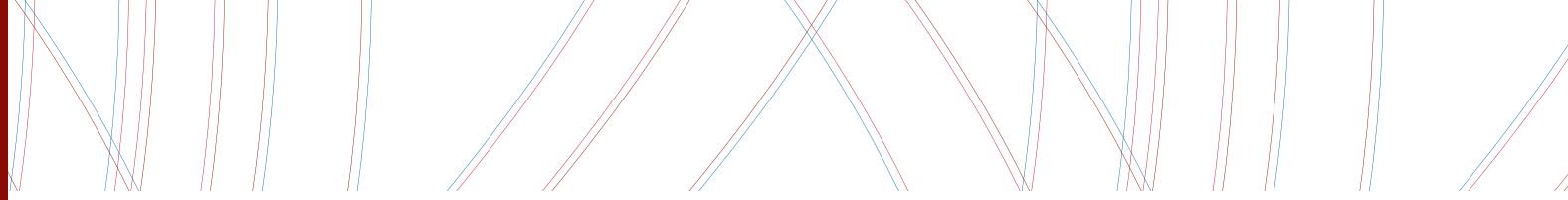
As we move forward with the implementation of this Plan, I encourage our residents, local organizations and the business community to not only read this plan, but identify opportunities on how you can contribute to our shared environmental vision for Leduc.

Together, let's build a more vibrant and healthy environment for our community today, tomorrow and for the years to come.

Sincerely,



Mayor Greg Krischke



NOTE FROM THE LEDUC ENVIRONMENTAL ADVISORY BOARD

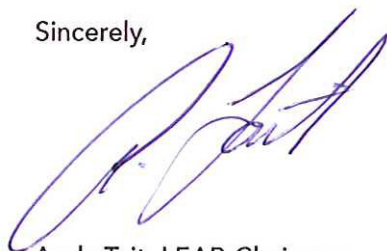
As an advisory board to Council, the Leduc Environmental Advisory Board provides Council advice on environmental matters; proposes programs and practices for the protection, enhancement and wise use of the environment; and disseminates information to and for the residents of the City to create a better appreciation of wise and prudent environmental practices.

We are excited about the opportunities the Environmental Plan - Phase 1 represents for the community of Leduc to continue its work on fostering positive change in the environment. We believe this plan supports our principles of ensuring Leduc is an environmentally responsible community. It will help to develop public awareness of environmental issues and initiatives, support the preservation and expansion of natural areas, support conservation of energy and water resources, and will support the reduction of waste in our community. All of these actions align directly with LEAB's key principles.

The Leduc Environmental Advisory Board is committed to being involved and invested in the implementation of the Environmental Plan - Phase 1. As a critical link between the City administration and the community, we are a key resource in ensuring that the Environmental Plan - Phase 1 is used in decision-making for years to come.

We welcome this document as an important next step in Leduc's growth as a leader in environmental responsibility and look forward to supporting its implementation both now and over time.

Sincerely,



Andy Tait, LEAB Chairman

the City of Leduc's mission:
to *protect* the unique environment of
our area and *enhance* the quality of
life in our community through effective,
innovative, responsible leadership and
consultation.



EXECUTIVE SUMMARY

The City of Leduc's mission is "to **protect the unique environment of our area and enhance the quality of life in our community through effective, innovative, responsible leadership and consultation.**" To begin the process of achieving this mission, the City of Leduc has developed the Environmental Plan - Phase 1. This Plan represents a first step towards greater environmental stewardship in our community through the development of a ten year vision for a healthy and clean environment in Leduc. The Environmental Plan - Phase 1 also supports that vision with definition of the actions needed to achieve Leduc's environmental priorities.

The plan is built on the following key principles:

- **Action Oriented**
- **Leadership**
- **Financial Responsibility**
- **Alignment**
- **Flexibility**

Community feedback and consultation was used to determine the key action areas:

- **Waste**
- **Water**
- **Energy and Climate Change**
- **Air**
- **Light and Noise**
- **Land**

Priority actions have been developed that will support the environmental principles being achieved in Leduc. These priority actions are:

Education and capacity building, which will include developing a brand, creating resources for the community, focusing on internal priorities, and engaging youth

City leadership through the development of a climate change readiness plan, understanding and reporting on current conditions, and reviewing the corporate procurement policy

Recognizing success through supporting early adopters of environmental initiatives, creating recognition tools, and reviewing the plan on a regular basis

These actions will be undertaken in the first three years of the plan's adoption to ensure Leduc's environmental vision is achieved.

The Environmental Plan also includes an implementation plan that breaks action items into short term, medium term, and long term actions to support the implementation of the goals of the Environmental Plan. Initial implementation steps are focused on waste and the implementation of an organics program.

Environmental sustainability is key to our City's mission, future vision, and goals. The City of Leduc will use the Environmental Plan - Phase 1 to help create a new, greener future for itself and its residents.



ENVIRONMENTAL PLAN

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Leduc's environmental goal:
Our natural environment is
healthy and clean



1. INTRODUCTION

The City of Leduc recognizes the importance of environmental sustainability. In our community, environmental sustainability is key to our City's mission: **"to protect and enhance the quality of life in our community and the unique environment of our area through effective, innovative, responsible leadership and consultation."**

Given our mission and the environmental challenges facing our community, the City must develop an integrated and encompassing environmental vision. We are calling our plan the Environmental Plan - Phase 1 and it will provide a 10 year strategy to promote environmental responsibility in the City of Leduc.

The Environmental Plan - Phase 1 will be a tool to support Council in setting priorities, making decisions, and managing environmental programs with better predictability and consistency. This Plan is the foundation of all environmental activity conducted by the City of Leduc. The City of Leduc will use the Environmental Plan to align all other environmental plans and programs to ensure consistency in all its action taken on environmental matters.

The Environmental Plan - Phase 1 has been created in response to a number of community and corporate needs, including:

Building on our existing initiatives - the City wants to build on its existing environmental activities by taking deliberate steps to improve environmental awareness, prioritize its investments, position ourselves for grant funding from other sources, and ensure that resources

are allocated efficiently and effectively

Taking action on the environment - the City needs to support and encourage the public to get involved in environmental action, because the public wants support and enabling action on environmental sustainability from the City

Staying ahead of potential risk and regulations - the City wants to be proactive in addressing environmental issues and reduce the impact of new regulations or environmental change

Being a leader on the environment - the City needs to be a leader and advocate in the community for environmental priorities. By providing that leadership, the City of Leduc will also encourage and enable other stakeholders and residents to take action on environmental initiatives

The Environmental Plan - Phase 1 has been organized into two key sections - Vision and Actions. The vision section will identify WHAT the City of Leduc and its residents want to achieve for their community. The Actions section will identify HOW that vision will be achieved.

Vision: people are choosing to live in Leduc because of its commitment to a healthy and clean environment

Leduc has taken action to raise environmental awareness

2. VISION

The Environmental Plan - Phase 1 takes its vision from the Municipal Development Plan's environmental vision, which is: "**our natural environment is healthy and clean.**" When the City of Leduc has achieved that vision in 2021, the community will look like this:

Leduc has taken action to raise environmental awareness throughout the community and has become a more effective steward of its environmental resources. The City of Leduc has been successful in reducing its 2011 environmental footprint, even through economic and community growth. Residents and businesses know more about the environment and their impacts on it.

They work hard to reduce their environmental impact and are inspired by the leadership that the City of Leduc has shown through taking action on a variety of key environmental issues. There are more trees than a decade ago. Many natural systems protected within the City of Leduc's boundaries. People are walking, biking, and taking transit more than ever before. People are choosing to live and work in Leduc because of its commitment to a healthy and clean environment, which has created a better quality of life for its residents. While there is still progress to be made, Leduc has recognized the value of taking proactive action to protect environmental health and is proud to be a role model for other communities.

Community Feedback

A number of public consultations have been conducted that have related to environmental management and priorities. Not all of them were directly linked to the Environmental Plan project itself, but they have informed the direction the plan has taken. This includes consultation related to the Municipal Development Plan, the 2011 Community Visioning Session, the Backyard Composter Questionnaire on environmental priorities, the Downtown Plan, and a three day community consultation related to the development of the Environmental Plan specifically. Through these events, over 500 people either attended sessions, provided written comments, or filled out a questionnaire.

The key findings from these consultation efforts are that residents of Leduc and City staff are interested in the environment and want to do their part to see positive impacts in that area generally. They want more education about the environment generally, and also want to see the City of Leduc take leadership on environmental action using a balanced and responsible approach.

All areas of environmental management were identified as important by the public and have therefore all been addressed in the Environmental Plan. Residents were asked to prioritize areas during the consultation and the combined results of all consultations identified waste reduction, water, and trees and natural areas as the highest priority areas. Therefore, these areas are given priority in this plan.

More information on the results of the public consultation can be found in the “What We Heard” report on www.leduc.ca.

The *community feedback* was used to direct the structure of the following sections identifying environmental action

Our Key Principles

The following principles will help guide the City of Leduc’s journey and evolution to achieve that 2021 vision of Leduc:

Action Oriented - the implementation of this plan will be practical and will make proactive change. It will incorporate monitoring and measuring that will be regularly tracked and reported on publically.

Leadership - the plan values the need to foster an evolution in our community’s environmental awareness. The City of Leduc will provide guidance both through education, policy, and action to build environmental capacity in administration and residents.

Financial Responsibility - this plan must be financially responsible and respect the capacity and resources of the City and citizens of Leduc. All actions will be treated as investments into our community to ensure that public money is spent wisely and efficiently. Creative options for financing environmental initiatives in Leduc will be explored and pursued wherever possible.

Alignment - the City of Leduc will also ensure that all of its planning efforts are aligned with the intent of the Environmental Plan to ensure its implementation is achieved. The plan will also look to align actions within the community and achieve initiatives through strategic partnerships.

Flexibility - the plan has been designed to be flexible in its approach to implementation to adapt to changing capacity, needs, and technology over the course of its implementation.

Vision: the City of Leduc will build *community awareness* about its environmental activities and programs



The first step in this effort will be to *report the information* we already collect to the public

3. ACTION PRIORITIES

The success of the Environmental Plan hinges on our community's approach to putting it into action. The following identify key actions that must be taken to support priority area-specific changes and act as a test to ensure that the plan is being effectively implemented. These actions are important and therefore will be provided to the community within the first three years of the plan's approval.

Education and Capacity Building

Education and outreach are critical to the Environmental Plan's implementation because change in a municipality is supported largely by behaviour changes in its population. The City of Leduc will build community awareness about the

programs and activities to help the City of Leduc achieve its objectives. The City of Leduc will do this by taking the following key actions:

Develop a Brand

A strong brand will be developed to help residents and businesses relate individual programs and activities back to the broader vision for environmental awareness and stewardship. The brand will also help people understand how to access information, get involved in pursuing the Environmental Plan's goals, and become excited about what their City is doing to ensure the natural environment is healthy and clean.

Create Community Resources

Tools and resources will be made available to residents to facilitate their ability to make changes in their daily lives and to better understand environmental issues. These tools could include a website, a physical kiosk in the Civic Centre and/or the LRC, a section of the library dedicated to environmental issues, or other similar resource types.

Focus our Internal Priorities

The City of Leduc will align its existing environmental actions to fit the priorities of this Environmental Plan to achieve greater efficiency, build understanding within administration on the priorities of the Environmental Plan and its overall intent, and build staff knowledge.

Engage Youth

The City of Leduc will lead education initiatives throughout the community. This will include going to schools to talk about the Environmental Plan initiatives students can get involved in, but also requires education of City staff, Council, and the community at large.

City Leadership

As the leader and advocate of Leduc's environment, it is important that environmental action becomes a part of the City of Leduc's culture. The City of Leduc will actively seek out opportunities to champion our community's environmental priorities by developing corporate policies. City of Leduc Council will champion environmental action and communication by supporting environmental initiatives to provide a positive example to residents. The City of Leduc will do this by undertaking the following key actions:

Develop a Climate Change Readiness Plan

The climate change readiness plan will address future water, land, and energy issues. It will also identify strategies to improve the City of Leduc's resilience to changes in weather patterns and storm severity over time. This readiness plan will be incorporated into the City's overall risk management strategy.

Understand and Report on Current Condition

The City of Leduc will begin to collect and report baseline information on all aspects of our operations related to the environment. This will support assessing the value of proposed improvements, setting long term goals and targets for reduction in key areas, and ensuring that action is taken in the highest priority areas. The first step in this effort will be to report the information we already collect to the public.

Review Corporate Procurement Policy

The City of Leduc will review its corporate procurement policy to consider its effect on the environment. This policy will support changes to green the City's approach to maintenance, purchase, and tracking of equipment and fleets, waste management services, and infrastructure.

The City of
Leduc will
*champion
environmental
action*

Recognize Success

The City of Leduc will provide opportunities for the City of Leduc, residents, and businesses to celebrate the progress it has already made on environmental initiatives and support recognition of future actions. The City of Leduc will undertake the following actions to recognize success:

Support Early Adoption

The City of Leduc will recognize early adopters of initiatives that support the goals of the Environmental Plan. This could include providing a venue to highlight environmentally responsible businesses, which would also provide the businesses a marketing advantage. It could also include highlighting programs or people that make a difference using public recognition tools like awards, mentions on the City of Leduc's website, or recognition through social media.



Create Recognition Tool for Action

The City of Leduc will create tools to help it measure success in achieving the goals of the Environmental Plan. One way this will be done is by providing a 'Do Your Part' webpage associated with the development of online environmental resources on the City of Leduc website listed above. This will allow residents and staff to self-report actions they are taking as a result of information, programs, or policies developed through the Environmental Plan.

Review the Plan

An internal review of the Environmental Plan will be undertaken every five years to ensure that monitoring, reflection, and any needed updates are occurring as it is being implemented to maintain its usefulness over time. A report will be provided to the public on the results of implementing the priority actions.

The following sections will identify the specific actions to be taken for the key priority areas identified by the public. Each will identify a *2021 vision*, followed by the actions that need to be taken to support that vision in becoming a reality.

Vision: the City of Leduc's residents and businesses are well informed on the benefits of waste reduction and diversion



4. WASTE

Garbage, recycling, reducing, re-using, and composting

What does waste in Leduc look like in 2021?

Residents have reduced the overall amount of waste to achieve a **residential diversion rate of 65%**. Leduc's municipal waste management services are among the best in Alberta, offering convenient residential curbside pick-up for organics, recyclables and garbage. Businesses and industry are actively managing their waste through recycling, composting, and source reduction, and are also achieving cost efficiencies. Leduc has turned waste into new economic development opportunities for area businesses and new revenue for the City.

Due in large part to municipal outreach programs, Leduc's residents and businesses are well informed on the benefits on waste reduction and diversion. Schools participate in waste reduction challenges, and community events provide recycling and composting facilities.

Why is it important?

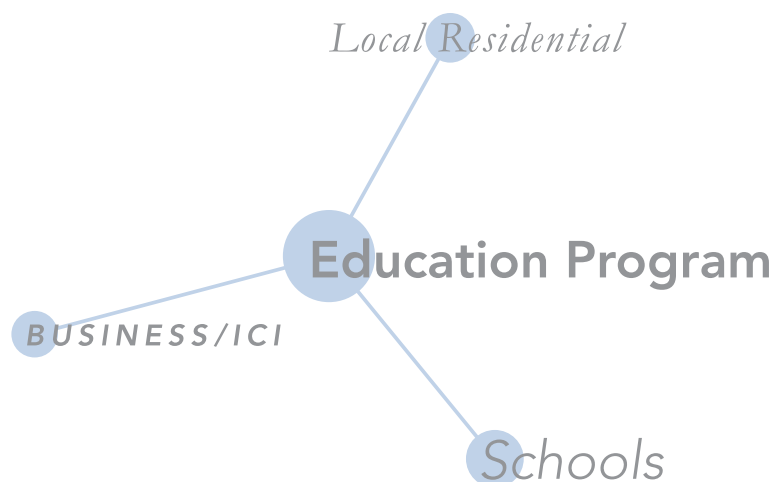
Responsible waste management reduces environmental pollution and litter. Programs like recycling and composting reduce costs, save limited landfill space, and can generate revenue. Un-recycled materials represent a lost resource and cost the City money to dispose. For businesses, envisioning solid waste as a by-product opens new economic opportunities.

In Alberta, it is estimated that 50% of solid waste is from industrial, commercial and institutional sectors (ICI), 26% is from construction and demolition and 24% is from residential activity. It is therefore important to develop initiatives specifically aimed at ICI and construction sectors as well as residents in order to achieve meaningful waste reduction targets for the community as a whole.

Actions and Plans

The City of Leduc will facilitate responsible waste management and help the community achieve its targets of 45% waste diversion by 2013, expanding to 65% by 2021 by demonstrating leadership, taking action, and providing education as follows:

- The City of Leduc will **undertake regular waste audits** in order to better understand the volume and composition of waste produced in Leduc, identify opportunities for continuous reduction, and track and report progress annually
- The City of Leduc will **provide more places to recycle**, including bins in public places.
- The City of Leduc will **investigate diversion and recycling opportunities for materials that are currently not within the recycling program** (eg., Styrofoam) and engage academic partners to consider alternatives
- The City of Leduc will work with community partners and not-for-profit groups to **develop guidelines for Zero Waste festivals and events**
- The City of Leduc will **reduce waste in internal operations** and will draft a policy that specifies: a commitment to recycling, composting, and e-pick up at city facilities; paper reduction by City staff, and employee engagement on waste management
- The City of Leduc will work with LEAB, any waste management contractors employed by the City of Leduc, and the Leduc District Regional Waste Management Authority to **coordinate education, branding and advertising for waste reduction initiatives**
- The City of Leduc will actively work with the Capital Region, the Recycling Council of Alberta, and the Province to **develop take-back legislation** (requires manufacturers to be responsible for the costs of managing their products at the end of life) and other legislation needed to support waste reduction and recycling



Actions for Residents:

- The City of Leduc will **decrease the residential waste limit** and implement a waste pickup system and schedule, as recommended in the 2010 City of Leduc Residential Solid Waste Management Study
- The City of Leduc will **create an organics diversion program with curbside pick-up** for food scraps composting, as recommended in the 2010 City of Leduc Residential Solid Waste Management Study
- The City of Leduc will **allocate resources to developing an education program for residents**. The education program will aim to identify ways residents can reduce waste at home and provide information about the waste stream and its management in Leduc

Actions for Businesses and Schools:

- The City of Leduc will **develop a waste reduction strategy for businesses and multi-unit developments**
- The City of Leduc will **develop an education program for industrial, commercial, and institutional (ICI) users** to encourage corporate responsibility and cost savings through effective waste management

- The City of Leduc will **allocate resources to developing an education program for schools** to support youth education and action
- The City will **use social media as a waste reduction engagement tool**, particularly for youth
- The City of Leduc will **develop policies to increase construction waste diversion** (eg., faster permit times or fee reductions for projects reaching a diversion goal)
- The City of Leduc will **consider a plastic bag reduction policy**
- The City of Leduc will develop policies to encourage the re-use of salvaged building materials, recyclable building materials, and buildings designed with future deconstruction in mind. Related to these policies, the City invests in the development of tools to help the private sector access information to help them build and renovate more efficiently

In all its efforts, the City will engage community and regional groups already involved as partners or supporters in achieving long term waste reduction.

Vision: Leduc is a more effective steward of water resources in 2021

6. WATER

Drinking water, stormwater, ground water, surface water, and wastewater

What does water use look like in 2021?

Leduc has become a more effective steward of water resources in 2021. The community has reduced per capita water consumption and has continued to ensure that its water distribution system runs efficiently and effectively to provide safe drinking water to our community. The City of Leduc has worked with important community partners such as the Capital Region Southwest - Water Services Commission (CRSWSC) and the North Saskatchewan Watershed Alliance to ensure a safe, healthy and abundant water supply for our community. In addition, the City has embraced best practices for stormwater management, which helps to improve the quality of stormwater, and uses it more effectively before being discharged back into the natural environment.

Why is it important?

Being wise water stewards is critical to the long-term viability of Leduc from multiple perspectives. Leduc is one community among many in the Saskatchewan River Basin and as such must work with community partners to ensure stewardship of the watershed. Further, water and sewer infrastructure present significant capital and operational expenses upon the City and it is important to use this infrastructure efficiently.

Water is a scarce resource, and with the anticipated impacts of climate change, Leduc could face more droughts and more intense rain storms that could overwhelm our community's stormwater infrastructure. Being prepared for the potential impacts of climate change as it relates to water resources will be critical to the community's health and safety.

Actions and Plans

The following actions and plans will be taken to support the achievement of our 2021 water resources vision for the City of Leduc.

Drinking Water

- The City of Leduc will continue to work with the Capital Region Southwest - Water Services Commission (CRSWSC) **to ensure good drinking water quality**
- The City of Leduc will **continue to enhance and educate the public on minimizing outdoor water use in summer months** to reduce the use of potable water on landscaping
- The City of Leduc will **research and consider a low flow fixture Bylaw** on all new residential and commercial buildings
- The community will **promote the use of native and adaptive landscaping materials** to reduce irrigation needs
- The City of Leduc will **continue to enhance the leak notification and usage reporting system** as new water meters are installed and consider a notification system or voluntary ban if a meter indicates overwatering or watering on the wrong day
- The City of Leduc will **develop a water conservation and efficiency plan** and report on it regularly
- The City of Leduc will consider water reduction strategies for existing **parks and open spaces**

Wastewater

- The City of Leduc will **develop resources aimed at homeowners to support the use of low flow fixtures**

Stormwater

- The City of Leduc will **develop an integrated stormwater management plan for the community** and support the development of targets for stormwater performance for new development
- The City of Leduc will **develop an annual incentive program** to help reduce the demands on our water system and minimize impacts from stormwater runoff (ie., rain barrels)
- The City of Leduc will **endeavor to regularly inspect and clean out local catch basins**
- The City of Leduc will choose a municipal parking lot to **pilot the use of porous pavement technology**
- The City of Leduc will **explore the use of on-sight water reuse technologies** and work with Alberta Environment to enable their use in new development
- The City of Leduc will require that **roof leaders are disconnected from the sanitary system**

Other potential actions:

- The City of Leduc could develop a campaign that supports water conservation activities throughout our community
- The City of Leduc could transition community owned gardens and landscapes to be “water-wise”
- The City and local environmental organizations could identify opportunities to incorporate natural and rehabilitated wetlands and natural landscapes

Vision: the community has made *effective* decisions on how local land resources should be used

7. LAND

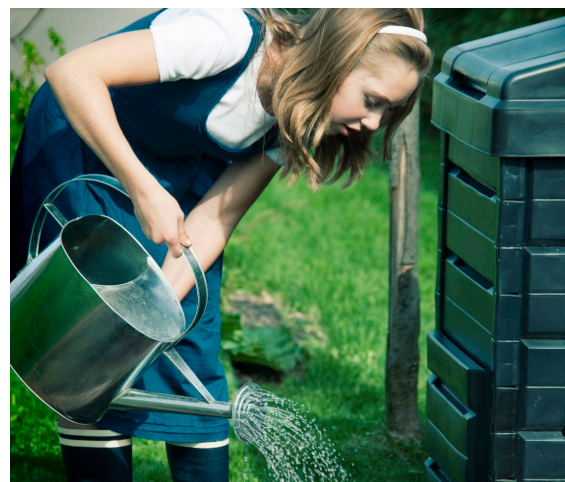
Trees, natural landscapes, parks, neighbourhoods, and business areas

How are land resources being used in 2021?

Leduc has protected its vital and ecologically important land resources and maximized the value of their ecological services, urban development, and food production. The City of Leduc has acknowledged residents' high level of interest in ensuring the community emphasizes trees and the protection of natural areas, and has ensured that the Urban Forestry Plan and the Telford Lake Master Plan have been implemented. The community has made effective decisions on how local land resources should be used to support the growth of our community's economy and environment. The land resources in Leduc also offer people that live within the community opportunities to recreate and experience nature.

Why is it important?

Ensuring that urban development respects the need to preserve and enhance ecological habitats is critical. It is important for recognizing the need for humans to remain in close contact with the natural environment. Further, with issues such as climate change, energy shortages and growing competition for resources, food security will become an even more important issue in the future. Providing a diversity of opportunities for local food production will be important.




Actions and Plans

The following actions and plans will be taken to support the achievement of our 2021 land vision for the City of Leduc and continue to strengthen a commitment to the effective management of natural areas.

- The City of Leduc will **promote development density to use land more efficiently**
- The City of Leduc will **enhance the urban tree canopy** by continuing to implement the strategies in the Urban Forestry Plan
- The City of Leduc will **give consideration to high productivity agricultural** land within their municipal boundary and how to manage this resource
- The City of Leduc will **update their Area Structure Plan Guidelines and Land Use Bylaw** to align with the Environmental Plan
- The City of Leduc will **continue to provide and expand community gardens**
- The City of Leduc will **protect natural areas** and work on habitat restoration
- The City of Leduc will **complete a natural habitat inventory for the community that also addresses wildlife movement**
- The City of Leduc will **prepare an urban agriculture strategy**
- The City of Leduc will **enhance efforts to connect residents with the natural environment** through the provision of natural park areas and trees
- The City of Leduc will **ensure shoreline protection** of areas such as Telford Lake
- The City of Leduc will **continue to enhance the multiway system** and provide educational opportunities on the natural environment
- The City of Leduc will **continue to implement the strategies recommended in the Urban Forestry Plan, MDP, Downtown Plan, and Telford Lake Master Plan**
- The City of Leduc will **develop a brownfield strategy for re-using contaminated sites**
- The City of Leduc will **review the potential for adopting more stringent local pesticide management policies**
- The City of Leduc will **develop a pesticides report** that is consistent with integrated pest management principles, and will consider if a full pesticide ban for municipal operations is warranted
- The City of Leduc will **consider strategies to enhance their existing natural area protection measures**, including setting clear goals for retention and identifying funding sources

The City of Leduc will continue to implement the strategies recommended in the Urban Forestry Plan, MDP, Downtown Plan, and Telford Lake Master Plan



Vision: by reducing our energy use, the City's operating and servicing costs have declined

8. ENERGY AND CLIMATE CHANGE

Power, fuel, greenhouse gasses, carbon emissions

What are Leduc's energy and greenhouse gas emissions like in 2021?

In 2021, the City of Leduc has become an energy wise community. As a leading community in energy sustainability, we have developed a management plan to significantly reduce our per capita energy use. By reducing our energy use, the City's operating and servicing costs have declined. This has led to significant financial savings which are regularly passed through to local residents and businesses. The benefits of being energy wise have also extended to local residents that have achieved cost saving opportunities associated with energy efficiency and conservation.

As an energy wise community, the City of Leduc has also made significant reductions in our greenhouse gas emissions profile. These reductions are achieved from our energy wise actions which have reduced our dependency on coal fired power generation, natural gas and carbon based transportation fuels.

Why is it important?

Energy sustainability is the foundation to a community's well-being. Ensuring that the City of Leduc, our local businesses and residents have access to a stable, reliable and affordable energy supply is critical to supporting the economic vibrancy and the social fabric of our community.

While energy sustainability is an important factor in supporting our community's well-being, as an energy wise community the City of Leduc will reduce our greenhouse gas emissions; the principal cause of global climate change. Since the Industrial Revolution, humans have significantly increased the concentration of greenhouse gases in the atmosphere by burning fossil fuels, including coal, oil and natural gas. As a result, our climatic system is under-going unprecedented changes that present social, economic and environmental risks to the global population. By acting as local energy stewards, the City of Leduc can make its fair contribution to this global challenge.

Actions and Plans

The City of Leduc will be a community leader in energy sustainability and greenhouse gas emissions management through the following actions:

- The City of Leduc will **develop a corporate energy and greenhouse gas emissions plan**. This plan will include the development of specific corporate energy and emission reduction targets and outline a strategy to guide the City's investments and actions with respect to energy
- The City of Leduc will **explore options to reduce energy consumption and costs in City-owned buildings, facilities and vehicle fleet**. This will include regular energy audits and upgrades on existing facilities and buildings as well as building efficiency into new facilities
- The City of Leduc will **consider the potential for greenhouse gas credits in its financial decision making processes** to encourage the City's investments and operations to be more climate friendly
- The City of Leduc will **develop a revolving energy financing fund** established through a one-time investment by Council to be replenished with the cost savings achieved from energy efficiency projects
- The City of Leduc could **identify opportunities for a district energy system, such as co-generation** or a waste-heat recovery system

The City of Leduc will help enable and foster our community to be energy wise through the following actions:

- The City of Leduc will **develop a community-based energy and emissions management plan**. This plan will include

the development of specific community energy and emission reduction targets

- The City of Leduc will work with its municipal partners to further **encourage the use of public transit for commuters**. The City of Leduc will also seek opportunities to expand the C-Line's capacity and its trip frequency
- In partnership with Climate Change Central and the Government of Alberta, the City of Leduc will **continue to help offer local residents incentives to support energy efficiency activities** in our homes
- The City of Leduc will **develop an education and outreach campaign to encourage local residents to be energy wise consumers**

Other potential actions:

- The City of Leduc will consider working with regional partners to undertake a landfill gas capture program
- The City of Leduc could evolve local by-laws, standards and planning practices to support energy efficiency and sustainability
- In partnership with Climate Change Central, the Alberta Municipal Climate Action Centre, the City of Leduc could offer climate change awareness activities in local business and schools
- Working with the Government of Alberta, the City of Leduc could develop incentives to attract clean energy industries to Leduc. This will complement our long history as a key hub in Alberta's energy sector, and help green the local economy and energy sector for the future



Vision: increased community awareness of local air quality issues has caused people to *take action* to reduce air pollution

9. AIR

Air quality and wind

What is Leduc's air like in 2021?

Leduc has become more active in supporting regional air quality initiatives in 2021. The City of Leduc has become a leading stakeholder in the Alberta Capital Airshed Alliance and has worked to ensure local air quality information has been provided to the people of the community.

In addition, the City, in partnership with the Government of Alberta and the Clean Air Strategic Alliance invested into a local air quality monitoring station. This monitoring station has helped us understand the impacts of our community's local industries and business, local transportation networks and our homes upon local air quality.

Because of the community's increased awareness of local air quality issues, the people and business of Leduc have taken it upon themselves to reduce the release of air pollutants from their homes, vehicles and daily activities.

Why is it important?

It is important for the City of Leduc to be active in supporting local air quality initiatives, as poor air quality can lead to localized human health, environmental and economic impacts.

From a human health perspective, poor air quality can lead to challenges in breathing patterns that can lead to wheezing and coughing, aggravation of existing respiratory and cardiac conditions. Additionally, for high-risk community members, poor air quality can result in premature death.

Environmentally, poor air quality can increase the acidity of our local lakes and streams, impacts nutrient levels in soils, and damage local agricultural crops¹. These impacts can lead to poor water quality, reduced vegetative growth and minimize the yields of local crops².

The economic impact associated with poor air quality can be significant as well. Consider that in 2008, the Canadian Medical Association found that the value of human health damages from air pollution exceeds \$8 billion each year³. In the context of the City of Leduc, poor air quality could be resulting in approximately \$5.4 million in lost economic value every year⁴.

Actions and Plans

The following actions and plans will be taken to support the achievement of our 2021 air quality vision for the City of Leduc.

- The City of Leduc will **develop a local air quality plan that helps guide the City's decisions around local point and non-point source air pollution releases** and works to address local air quality issues
- The City of Leduc will **become an active partner in the Alberta Capital Airshed Alliance**. As an active partner, The City of Leduc will contribute to the management of local air pollutants and achievement of local air quality objectives through the development of regional air pollution management plans
- The City of Leduc, in partnership with the Edmonton International Airport, will work with the Government of Alberta, the Clean Air Strategic Alliance and the Alberta Capital Airshed Alliance to **have an air quality monitoring station installed in our community**
- The City of Leduc will **develop an internal anti-idling policy and launch a community education and outreach campaign**, giving consideration to emergency response and other specialized services
- The City of Leduc will **develop a reporting tool to regularly update the status of local air quality conditions** based on the Air Quality Index

Other potential actions:

- The City of Leduc could provide resources to local residents on the actions they can take to reduce air pollutants from their lawn care activities; including the reduced use of lawn-fertilizers, gas-powered lawn mowers and weed-whackers
- The City of Leduc could self-impose an anti-idling ban for corporate operations
- The City of Leduc could develop an active transportation and transportation demand management plan that includes an outreach campaign to support the use of emissions free transportation and minimizes single-occupancy vehicle trips



develop a reporting tool on the status of local air quality

¹United States Environmental Protection Agency. May 9, 2008. "Health and Environment - Particular Matter." Available at <http://www.epa.gov/air/particlepollution/health.html>

²United States Environmental Protection Agency. May 9, 2008. "Health and Environment - Ozone." Available at <http://www.epa.gov/air/ozonepollution/health.html>

³Canadian Medical Association. 2008. "No Breathing Room: National Illness Costs of Air Pollution." Available at: <http://www.cma.ca/icap>

Vision: reducing light and noise pollution has contributed to a better quality of life in Leduc



10. NOISE AND LIGHT

Light pollution and noise pollution

What is Leduc's lighting and noise level like in 2021?

Leduc has worked with various community partners to reduce the impact of light and noise pollution, without limiting the opportunities for the activities that result in this pollution. Reducing light and noise pollution has contributed to a better quality of life in Leduc. The din of transportation noise and glow of lights has been reduced. It has been replaced with relative urban silence and the ability to see the stars at night.

Why is it important?

There continues to be emerging evidence that light and noise pollution, not only impacts the quality of life in an area, but can also have significant consequences to environmental and human health. Working with community partners to address these issues is critical to the health and well-being of residents and the natural environment.

Actions and Plans

- The City of Leduc will **continue its development of local noise guidelines**
- When appropriate, The City of Leduc will **use and encourage local developers to use natural and soft noise barriers in new developments**
- The City of Leduc will continue to work with the Alberta Government and Edmonton International Airport to determine **ways to reduce noise and light pollution as it relates to transportation**
- The City of Leduc will **explore and work to adopt innovative street-lighting standards** that reduce light trespass
- The City of Leduc will develop **educational and outreach materials** that help residents and businesses adopt low impact outdoor and indoor lighting practices



working with community partners to address these issues is critical to the *health and well-being* of residents and the natural environment

11. IMPLEMENTATION

The preceding section identifies many action items to be addressed over the course of years. That effort has been broken into reasonable, measured steps over the course of the Environmental Plan's implementation to ensure that the implementation method chosen is consistent with the plan's key principles of financial responsibility, achievable results, alignment, and flexibility and guidance. The actions to be taken have been identified using

three timelines - short, medium, and long term. This will help the City of Leduc to prioritize its investments.

The Environmental Plan - Phase 1 is intended to be a 10 year document, and should be reviewed in 5 years to ensure that it's direction is aligned with the City of Leduc's priorities.

implementation
methods chosen
are consistent
with the plan's
key principles



Short Term Action Priorities


Plan Area	Action	Responsibility	Resource Needs
Education and Capacity Building	Develop a brand to communicate the environmental plan	Environmental Services & Communications	low
	Create community resources - website development and advertising	Environmental Services & Communications	low
	Focus internal priorities - align existing civic actions to the Environmental Plan's priorities	Council & all Departments	med
	Engage youth - speaking at schools to encourage students to get involved and take opportunities to lead youth engagement where available	Council, all Departments & LEAB	low
City Leadership	Council supporting and championing the Environmental Plan - look for opportunities to speak about and champion initiatives related to the Environmental Plan's implementation	Council	low
	Develop a Climate Change Readiness Plan - to be incorporated into the City's overall risk management approach	Environmental Services, Council and LEAB	med
	Report on current conditions - collect and identify baseline information on water and energy use, greenhouse gas emissions, fleet fuel useage, pesticide use, noise studies, etc	LEAB & Council	med
	Review Corporate Procurement Policy - include maintenance, purchase, and tracking of equipment and fleets, waste management, and infrastructure	Environmental Services	low
Recognize Success	Support early adoption - consider awards, mentions on the City website, or recognition to social media	Council, Environmental Services, Communications & LEAB	low
	Create online recognition tool - develop a Do Your Part webpage to allow residents to self-report environmental action	Environmental Services & Communications	low
	Review the Plan against indicators every five years	Council, Environmental Services, and LEAB	low

Medium Term Implementation Items

Plan Area	Action	Responsibility	Resource Needs
Light and Noise	Continue developing local noise guidelines	Engineering & Council	low
Air Quality	Become a member of the Capital Airshed Alliance	Environmental Services	med
	Conduct an air monitoring study to determine the levels of pollution in Leduc	ACAA, Alberta Environment, EIA, Leduc County, City of Leduc	med
	Create and endorse a corporate anti-idling policy	Council & all Departments	low
Energy and Climate Change	Pursue funding opportunities for co-generation project for the LRC	Environmental Services & Facilities	med
	Develop corporate energy efficiency and greenhouse gas plan	Environmental Services, Council, Facilities, Public Services & LEAB	low
	Report on energy efficiency and greenhouse gas emissions	Environmental Services	low
Land	Provide public information and education on the existing pesticide practises	Environmental Services, Public Services & LEAB	low
	Implement Urban Forestry Plan	Public Services and Community Development & Service Planning	med
Water	Consistently run environmental bulk purchase programs, like the rain barrel sale and home composters	Environmental Services	med
	Join the North Saskatchewan Watershed Alliance	Council, Environmental Services	med
	Support ongoing water conservation monitoring and develop water conservation and efficiency reports	Environmental Services & Public Services	low
	Continue to offer water conservation resources for homeowners	Environmental Services & Public Services	med
	Ensure infrastructure maintenance is undertaken regularly on catch basins	Public Services	low
Waste	Implement a program to undertake curbside organics collection	Engineering & Environmental Services	high
	Develop a corporate waste reduction plan and encourage City employees to reduce waste	Engineering & Environmental Services	low
	Develop a waste reduction plan for businesses and multi-family units	Environmental Services, Engineering, Chamber of Commerce, other partners & LEAB	med
	Undertake regular waste audits to track progress and report to the public	Environmental Services, Engineering, Leduc & District Regional Waste Management Authority	low

Long Term Implementation Items

Plan Area	Action	Responsibility	Resource Needs
Land	Complete a natural habitat inventory	Environmental Services, LEAB, Public Services & CDSP	high
	Continue to enhance the multiway system	Planning & Development & CDSP	med
	Develop a brownfield strategy to help reclaim contaminated sites	Planning & Development, Environmental Services	low
Air	Provide air quality monitoring information publicly	Environmental Services & Communications	low
	Develop a local air quality plan	Environmental Services & Council	med
Light and Noise	Explore streetlighting options that reduce light trespass and provide public information and resources on reducing light pollution	Engineering	low
	Consider development policies to incorporate noise mitigation in new development	Planning & Development and Engineering	low
Waste	Develop plan and create policy for construction waste diversion	Environmental Services, LEAB, Communications, Engineering	low
	Partner to provide recycling and compost bins for public areas and community events	Environmental Services, Engineering, LDRWMF, LEAB, Communications & Public Services	low
	Consider a plastic bag use reduction policy	Environmental Services	low
Water	Implement a low flow fixture bylaw for all new residential and commercial buildings	Environmental Services, Council, Planning & Development	med
	Develop integrated storm water management plan and targets	Engineering Services & Public Services	high
	Develop a pilot project to try low-impact development materials like porous pavement	Engineering Services, Public Services, Planning & Development	med
Energy	Consider the potential for greenhouse gas credits in financial decision making	Council and all departments	low
	Develop a revolving energy financing fund	Council and Environmental Services	high
	Encourage the use of public transit in Leduc	Council, Transit and all Departments	low



the City of Leduc will use
the *Environmental Plan*
– *Phase 1* to help create a
new, greener future for itself
and its residents

12. CONCLUSION

Environmental sustainability is key our City's mission: **"to protect the unique environment of our area and enhance the quality of life in our community through effective, innovative, responsible leadership and consultation."** The City of Leduc will use the Environmental Plan - Phase 1 to help create a new, greener future for itself and its residents. The Environmental Plan identifies a number of priorities to achieve its goals, including building capacity in the community through providing education, leadership, and support on environmental initiatives.

This document represents the culmination of the unique approach taken by the City of Leduc to advance the Environmental Plan, and further integrate environmental sustainability within the City's policies and community governance. The Environmental Plan - Phase 1 plan is a "living document." It will be updated and revised as new information becomes available and our community fulfills our commitment to action. Please check back regularly to see the progress the City and how our community is doing in our sustainability journey.