TOWN OF OKOTOKS

ENVIRONMENTAL MASTER PLAN

PROGRESS REPORT

AUGUST 2021

Okotoks

Historic Past. Sustainable Future

PROGRESS REPORTS

Town administration monitors progress towards meeting its goals, targets, strategies and activities, and provides annual reports to Council, which are available to the public on the Town website. The Annual Town Report, which is published online each year, is another way that progress is reported to citizens. Reporting provides greater accountability, transparency and understanding of the strategic goals, progress and accomplishments. Council and administration's regular review allows us to evaluate how we are performing towards our strategic goals and to make adjustments as necessary to realign for success.

TOWN VISION

The Town of Okotoks fosters a culture of resiliency - where people, businesses, ideas and sense of community thrive. Grounded by the Sheep River valley and supported by thoughtful planning and design, a strong local economy and a vibrant civic culture, Okotoks offers exceptional quality of life at every stage of life. Respect for each other and the natural environment makes Okotoks home.

TOWN COMMITMENT

The Town of Okotoks is committed to engaging the community in environmental sustainability beyond the scope of the Environmental Master Plan (EMP). **Okotoks' Environmental Education Centre** opened in the fall of 2017, and provides educational information and visual presentations of Okotoks' natural ecosystems, with a current feature on Okotoks' watershed.

GUIDING PRINCIPLES

The following guiding principles are the basis for long-term planning for our community and were developed by citizens.

1. Livable Okotoks
2. Vibrant Civic Culture & Heritage
3. Inclusive Neighbourhoods
4. Active Lifestyle
5. Environmental Stewardship
6. Local Economy

More details descriptions of the principles, themes and values can be found at okotoks.ca/community-vision.

TARGETS & MEASURES

Goals

To create more defined measures of success, the environmental vision was refined into specific goals within each key action area. These overarching action areas and their associated goals emerged out of public and stakeholder consultation, and were finalized through an iterative consultation process with a Steering Committee. Each action area has a dedicated section in the Plan that outlines the strategies that will be taken to achieve these goals.

Targets

To help gauge progress towards achieving these environmental goals, the Town of Okotoks has set a number of aspirational targets. These have been established in comparison to other leading municipalities across North America, and will be useful in establishing an overarching intention with respect to the level of the Town's ambition. Each key action area in the Environmental Master Plan outlines one or more key aspirational targets that will be refined as data is collected over time. Once enough data has been collected to establish a baseline of how Okotoks is performing in each action area, the Town will be better equipped to identify more specific and suitable targets. Each aspirational target is designed to help Okotoks achieve a sub-goal. Together, achieving each of the aspirational targets will help the Town reach its overarching goals.

2021 PROGRESS HIGHLIGHTS

1 ECOSYSTEMS & AGRICULTURE

Prioritize and protect the connectivity and integrity of local ecosystems

GOALS

- Enhance the quality and biodiversity of the prairie ecozone
- Protect and restore local ecosystems
- Increase residents' access to and connection with nature
- Improve residents' access to healthy local food

Key Strategies

1. Develop and implement a comprehensive Ecosystem and Biodiversity Strategy
2. Forge partnerships for ecological protection
3. Develop and implement a Town-wide green network strategy
4. Foster a regional system of ecological parks and areas
5. Encourage the naturalization of private properties
6. Increase the community's understanding and connection with nature
7. Reduce light pollution
8. Encourage local food production
9. Provide education and support for local and regional sustainable food choices and practices

Progress Highlights

- At the March 22, 2021 meeting, Council approved signing the Bee City Canada Resolution to formally commit to preserving and enhancing habitats for native pollinators in Okotoks. Okotoks.ca/BeeCity
- The new Municipal Development Plan and Land Use Bylaw were passed in 2021. These key municipal documents address several policy areas including:
  - Dark sky outdoor lighting;
  - Allow co-op multi-family local gardens in multi-family development Okotoks.ca/community-garden;
  - Protection and enhancement of existing ecosystems and their biodiversity through land development requirements, land use designation, and enhanced flood hazard area development restrictions;

Progress Highlights

- The Calgary Metropolitan Region Board (CMRB) has created definitions for Environmentally Sensitive Areas, which include areas of high value and biodiversity in the region. The Natural Asset Inventory was developed as a tool to identify these areas within town boundaries. Okotoks.ca/Natural-Areas
- 1200 seedlings were planted in the river valley in May 2021 and the Integrated Pest Management Plan has been updated to plan for the management of emerald ash borer and Dutch elm disease.
- Through Green Living workshops and educational programs, residents are continually encouraged to restrict/avoid use of pesticides on residential properties.
- Messaging to the public has encouraged use of the BMX track and single track trail system for biking to prevent further damage to the river valley forest ecosystem.

Next Steps

- Work with Indigenous Nations on issues regarding traditional resources, such as: knowledge of critically important ceremonial and medicinal plants, their ecology and preservation; and specific histories and stories of the landscapes.
- Incorporate species at risk into the Natural Asset Inventory.
- Develop a municipal wetland policy as part of a larger high value ecosystem policy.
- Municipalities now have the opportunity to dedicate lands to construct or reconstruct wetlands with provincial funding collected through the Alberta Wetland Policy program. In 2022, lands within municipal boundaries will be assessed for wetland development as part of this program.

2 LAND USE & URBAN DESIGN

Create compact, vibrant and inclusive communities that reduce our environmental impact and improve quality of life

GOALS

- Increase the diversity of land uses and innovative housing types, including high quality, higher-density, affordable options
- Integrate various modes of transportation into our urban fabric, including active transportation and public transit
- Protect and actively promote ecosystem integrity and connectivity in new and existing developments

Key Strategies

1. Implement holistic environment requirements for new development
2. Ensure all new neighbourhoods are designed as complete, transit-oriented communities
3. Enhance local ecosystem integrity and biodiversity through addition of green infrastructure in the urban environment
4. Increase the number of diverse building forms and functions in new and existing neighbourhoods
5. Increase green building requirements for new construction.

Progress Highlights

- The new MDP policies approved by Council and CMRB in 2021 addressed planning and urban design for active transportation, transit-oriented communities, density targets, diverse housing types, and development in the flood zones.
- The Land Use Bylaw passed June 14, 2021 introduced parking maximums and encourages shared parking.
- Interpretive signage, funded by the Province of Alberta, has been installed in the areas adjacent to the Environmental Education Centre. The messaging speaks to biodiversity and ecosystem protection, benefits of the urban tree canopy, and active transportation as a way to help mitigate climate change in our region.
- Macleod Trail was designated as a municipal heritage resource in October, 2020.

Next Steps

- Revisions to the Town's landscape design and construction specifications are in progress to update practices for the protection and enhancement of urban trees. An inter-municipal review of tree related policies and bylaws is also underway.
- Biological field assessments are underway to help validate areas suitable for future trail development and any areas recommended for closure and rehabilitation.
- Ecological assessments have been completed to guide development at the Waller Park day use area and single track trail expansion in the river valley, and are being incorporated into the conceptual planning for the former bible camp lands.
- With the focus on energy efficiency and carbon neutrality by 2050, new developments will need to meet net zero standards or risk requiring retrofits within the next 10 years. Okotoks will be developing Green Building Guidelines in 2022 to encourage developers and builders to meet net zero energy targets for all new developments.

3 ENERGY, EMISSIONS & AIR QUALITY

Minimize the generation of greenhouse gas emissions and air pollutants from all sources

GOALS

- Significantly improve the energy and emissions performance of new and existing buildings & facilities
- Reduce emissions from transportation systems
- Enhance the ratio of energy generated or purchased from low-carbon, renewable sources
- Improve indoor and outdoor air quality

Key Strategies

1. Develop and implement a comprehensive Renewable Energy Strategy to encourage, support and implement new forms of community renewable energy generation
2. Work with partners to identify appropriate alternative space heating fuels and technologies
3. Improve access to energy and emissions performance of existing buildings
4. Require higher levels of energy performance in new building construction
5. Assist and incentivize the building industry and homeowners in meeting higher energy performance levels in new and existing buildings
6. Foster the use of non-automotive, active modes of transportation
7. Improve access to public transit options, within Okotoks and between neighbouring municipalities
8. Support the uptake of low-emissions vehicles
9. Support car and ride sharing
10. Create pedestrian-friendly and emission-free environments
11. Develop and implement measures to improve indoor and outdoor air quality

Progress Highlights

- The National Energy Code 2019 is part of the design, compliance and review for permit applications
- New Municipal Development Plan and Land Use Bylaw encourage and regulate development to be more pedestrian-friendly

Progress Highlights

- To promote active living and reduce vehicle usage, snow clearing of the primary pathway system is completed seven days per week.
- In partnership with Calgary Regional Airshed Zone, air monitors have been installed at the Okotoks Recreation Centre to monitor changes in local air quality.
- With the installation of the 508 KW rooftop solar PV system at the Okotoks Operations Centre that came online in April 2020, the Town has moved closer to becoming carbon neutral by 2050. As of July 2021 it has produced 750 MWh of energy for the wastewater treatment plant, saving the production of 294 tonnes of greenhouse gases, which is equivalent to planting 8,776 trees.
- The Town's purchasing encourages low emission / environmentally friendly options with each purchase, and has resulted in behaviour changes, such as the replacement of a ride on mower with an electric mower.
- In the first half of 2021 under COVID-19 restrictions, Okotoks Transit completed 18,703 trips; the first year goal was 18,000 for the entire year!

Next Steps

- Okotoks is focusing its work over the next few years on reducing energy consumption in residential and corporate buildings. Initiatives include:
  - The Clean Energy Improvement Program (CEIP), approved by Council in 2021 is being developed to encourage energy efficient retrofits for residential buildings.
  - The Municipal Energy Manager program is conducting energy efficiency assessments on all municipally owned buildings to identify and implement low cost and no cost measures to reduce gas and electrical consumption.
  - Renewable energy is being installed on all municipally owned buildings, including the operations centre in 2020, pasons centennial arenas and arts & learning campus in 2021, and okotoks recreation Centre and the Operations Shop in 2022.
- Review of the Community Access program and pilot on-demand transit will occur in 2022 (after one year of normalized trips not impacted by COVID-19).
- Funding is being obtained to install a fast electric vehicle charger at the Arts and Learning Campus in 2021.

4 WASTE SYSTEMS

Dramatically reduce the amount of waste that is generated and disposed

GOALS

- Increase the opportunities for the reuse and repurpose of waste items
- Reduce the volume of waste going to the landfill
- Reduce the amount of total waste that is generated by all activities within the community

Key Strategies

1. Encourage responsible waste reduction practices in business and manufacturing
2. Explore prohibiting select single use items
3. Encourage practices and opportunities to share or reuse materials and products
4. Provide continuous education to reduce water production and improve waste diversion rates
5. Enhance the scale and efficiency of regional waste collection, processing and product delivery
6. Further waste diversion practices and services within the residential sector
7. Advance waste diversion practices in the industrial, commercial and institutional (ICI) sector
8. Dramatically improve the diversion of construction and demolition (C&D) waste from landfill
9. Implement a community-wide public space and event waste diversion program
10. Explore options for deriving energy from waste

Progress Highlights

- Developed and implemented a three-stream waste diversion program for external community events, included in Special Event Permit planning.
- Developed an onboard tracking system used during waste collection for waste non-compliance. The information gathered is used to understand challenges and how to approach a targetted

education campaign. An electronic notification system was developed to inform residents when there are infractions. Letters are emailed or hand delivered to addresses that are non-compliant. Educational information forms are part of the package that are being sent out. Additional education material is left for residents during street audits.

- Additional waste stations were installed in public spaces at the water spray park, the indoor aquatics observation area, Pason Centennial Arenas, and Senior Centre
- Street sweeper sand is upcycled for use in outdoor riding areas.

Next Steps

- A review of the current "Pay As You Throw" system currently used by the Town.
- Continue to work with two local schools to collect organics material. This pilot program included in-class waste audits and presentations to children and staff.
- Council approved an extension to the implementation of the Industrial, Commercial, and Institutional (ICI) waste program due to the current recycling market climate and the issues with facilities for managing organics. A waste diversion strategy will be aligned in the new waste management plan being drawn up this year.

5 WATER SYSTEMS

Reduce water demand and consumption of drinking water and improve the water quality of our watershed

GOALS

- Enhance the efficiency of the water system by increasing the capture and reuse of rainwater, stormwater, treated effluent and grey water
- Form regional partnerships to protect and manage the regional watershed
- Protect and improve water quality through riparian and wetland production and by reducing overland runoff and nutrient loads

Key Strategies

1. Implement an advanced water reuse strategy
2. Develop an aggressive peak water demand program
3. Increase water conservation requirement and incentives
4. Increase information and education on water use and opportunities for conservation
5. Encourage and/or require low-water landscaping practices
6. Collaborate regionally on source water enhancement and watershed protection
7. Decrease sources of contamination in the Sheep River
8. Enhance efficiency and quality of wastewater treatment process

Progress Highlights

- By fall of 2020, participation in the water conservation rebate program saw a significant increase of 33% over the same time period in 2019. The most significant increase was in the xeriscape program, with residents completing more and larger projects (e.g. entire front or back yards). Co-benefits of the program include supporting the local economy and educating the public on water-wise yard practices. The water rebates are self-funded by using a portion of the revenue from third tier water users, making this a sustainable program in which high water users subsidize residents willing to reduce their water consumption with water-wise yard practices.

- Continued efforts to decrease water consumption and infrastructure improvements resulted in the ability to push back the timeline for supplemental water needs for approximately nine years based on a growth rate of 1-2% annually.
- Rubber asphalt was installed in 2020 along the Milligan Drive pathway as a pilot project to determine effectiveness for tree root intrusion, permeability to rain, and impacts from snow and ice control (gravels and salts). Results will be reviewed after the warranty ends in 2022.

Next Steps

- The Town is researching storm water implementation from storm ponds. In addition, subdivision developers are being asked to incorporate storm water reuse in the design plans.
- Regulations were eased in early 2021 on the use of reclaimed and recycled grey water. In 2021-2022, the Town will investigate how best to implement the new criteria and reuse more non-potable water.

6 CLIMATE ADAPTATION & RESILIENCE

Improve Okotoks' ability to adapt to the impacts of climate change

GOALS

- Improve community resilience to severe weather and other extreme events
- Improve the safety of vulnerable populations to heat waves
- Establish a means of planning for, and recovering from, severe drought

Key Strategies

1. Develop a Town Climate Change Action Plan
2. Mitigate the impact of flooding on community assets and infrastructure
3. Enhance and protect existing eco-assets that provide buffering from climatic events

Progress Highlights

- Resilient Okotoks: Climate Action Plan was completed and unanimously approved by Council March 22, 2021. The plan lays out actions to reduce emission in Okotoks of 30% by 2030, Engagement actions for the Climate Action Plan found public support was highest for the following three actions:
  - retrofitting existing buildings,
  - increased waste diversion programs, and
  - electric vehicles incentives. A Natural and Naturalized Asset Inventory Report was completed in September 2020. This inventory prioritizes and protects the connectivity and integrity of local ecosystems.

- Terms of Reference have been drafted to undertake a River Valley Master Plan to facilitate the conversion of lands to natural or recreational use along the river valley where appropriate.
- Regulations have been incorporated into the new Land Use Bylaw to address flood level construction requirements and other measures to protect existing developments and redevelopment within the floodplains.
- A Natural and Naturalized Asset Inventory Report was completed in September 2020. This inventory prioritizes and protects the connectivity and integrity of local ecosystems.

Next Steps

- Climate Vulnerability Assessments will be completed on municipally-owned buildings and infrastructure in residential neighbourhoods in 2022-2023.
- A Sustainable Development Score Card is under development to assist with climate risk assessments and local development planning.
- The Natural and Naturalized Asset Inventory is being shared with developers and business centres to ensure that existing high value assets are maintained to provide relief from heat waves.
- The Urban Tree Inventory is being expanded through the Downtown Revitalization Program as protection against increased heat in the urban centre.

OFF-TRACK INITIATIVES AND RECOVERY PLANS

The Town administration has put the following into place for off-track initiatives.

1 Ecosystems & Agriculture

- With the onset of COVID-19 in 2020, priorities for the community shifted and additional Alberta Health Services requirements were implemented. This delayed some initiatives including:
    - Enhanced opportunities for public outdoor activities and connection with nature through additional events.

2 Land Use & Urban Design

- A Trails Master Plan has been deferred to better align with the need for revision of the transportation plan and is to be expanded to a comprehensive mobility plan. This will fall under the strategic direction of the new Council.
- The Town will explore opportunities to establish a regional system of ecological parks through the Calgary Metropolitan Regional Board (CMRB)

3 Energy, Emissions & Air Quality

- Exploring options for deriving energy from waste has been deferred until after regional waste solutions are prioritized and implemented.
- Regional transit initiatives are deferred to allow focus on operating the new local transit system.
- Hosting closed-street downtown events, such as Car-Free days were delayed due to COVID-19 and Alberta Health Services requirements.

4 Waste Systems

- Reuse programs were delayed due to public health concerns during COVID.
- Waste education presentations developed for classroom were delayed due to inconsistent school attendance in 2020 during COVID.

5 Water Systems

- Research into options on how to treat impermeable surfaces as a utility will be explored as time permits.

6 Climate Adaptation & Resilience

- n/a

Okotoks

Historic Past, Sustainable Future