Environmental Management PLAN

2021-2026

LACOMBE COUNTY

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INTRODUCTION

1.1. What is an Environmental Management Plan (EMP)?

An Environmental Management Plan is a specific plan that is developed to ensure environmental management within an organization. It's a framework document that includes organizational structure, planning activities, responsibilities, practises, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining a desired environmental standard.

This document lays out the environmental issues that the County has identified as management priorities. This document will also seek to clearly divide and designate the various responsibilities of environmental management across different levels of municipal administration.

The EMP is one expression of Lacombe County's ideals:

- A vision of "an attractive, balanced, and progressive community,"
- A mission to "build a safe and vibrant community through leadership, innovation and the development of healthy relationships,"
- Key principles, aiming to "[recognize] our history and solid foundation [to approach] the role of providing the best possible level of municipal services for our citizens through a base of collaborative and supportive teamwork."

The EMP is a living document that lays a foundation for Lacombe County to make environmentally sustainable and conscientious policies and initiatives. This document will also set clear targets for developing, reviewing, and maintaining this plan as new information (i.e. best practices, data, and relevant research) becomes available to setting and/or re-setting management priorities.

1.2. Purpose of the EMP

All of Lacombe County's municipal plans originate from the Lacombe County Strategic Plan. The Strategic Plan sets direction for County activities, giving information and direction to individual departments over a 5-year period from 2018-2023. Council and senior management have committed to reviewing this document again in 2021 and 2023 to adjust as necessary to shape other plans and policies. The EMP is one of many documents that shapes and guides Lacombe County's functions. As the name suggests, the EMP specifically provides guidance on environmental management, while other plans provide guidance on land use planning, operations requirements, and/or recreational services.

When Lacombe County adopted its first EMP, it broadcasted the County's commitment to environmental stewardship and sustainable development. While Lacombe County communicated its good intent in its EMP, it is

necessary to periodically revisit, revise, and improve existing policies. This revision of the EMP attempts to build on successful aspects of the last version, to consolidate complementary goals, to incorporate relevant new information, and to improve the function of the EMP. By so doing, Lacombe County should be better able to incorporate the EMP as a foundational plank of its operational philosophy.

As a part of a previous Strategic Plan, the County adopted an Environmental Policy [Policy #AD(32)] in August 2013, which provided direction on how the County wants to approach environmental management. This provided a broad perspective on how environmental management should express the County's "…[commitment] to a healthy environment for future and current generations." This policy also commits the County to the following:

1. In all County decision-making we shall:
    - Integrate environmental considerations into all decision-making processes.
    - Base all decisions on transparent and consistent policies that balance social, economic and environmental needs.
    - Consider both short and long term impacts in all decisions.
2. Lacombe County will provide leadership by:
    - Example.
    - Demonstrating a financial commitment to environmental improvements.
    - Instilling the ethics of environmental responsibility, through education and communication with all employees, contractors, consultants and suppliers.
    - Preparing our County and community for future environmental policy measures from higher levels of government that may be more rigorous or prescriptive.
3. In all County practices and activities we shall:
    - Understand and comply with federal and provincial legislation.
    - Implement current best management practices.
    - Monitor and evaluate environmental performance to identify opportunities for improvement.

The original EMP sought to achieve the objectives described above by pursuing projects, mitigation measures, and educational initiatives to complement each of the environmental management priorities.

The priorities of this policy and the EMP originated from input from the public, external stakeholders (i.e. community watershed and advocacy alliances/ groups), and available scientific data. Much of this information was condensed into the 2013 Lacombe County State of the Environment (SOE) Report, which exhaustively explored the County's various environmental parameters wherever data was available.

Each draft of the EMP aims to complement the explicit and implicit objectives of both superseding documents. The EMP should help shape management direction and decisions, which then filter through to day-to-day activities.

The intent of the EMP is to act as a guiding force in all the County's activities, contributing to the planning processes of senior management. By working to ensure senior management internalizes EMP priorities, the County's environmental management priorities will percolate through to the behavior and day-to-day tasks/activities of the County's employees, contractors, suppliers, and residents.

EMP DEVELOPMENT & REVISION

2.1. Revising the EMP Focus

The EMP is now in its second publication. The review and revision of the EMP began by creating an inventory of environmentally relevant County actions since Lacombe County adopted its first EMP in 2013. By reflecting on the County's activities, it was possible to identify some strengths and challenges relative to the 2013 EMP priorities. By revising and updating the EMP, the County seeks to better achieve the vision of a healthy environment for current and future generations.

It was important that Lacombe County's original EMP acknowledged the need to approach environmental management dynamically. The revised EMP is also dynamic by design, following the original EMP's commitment to changing in response to new information/data, and/or shifting priorities of stakeholders, and/or shifting priorities of ratepayers.

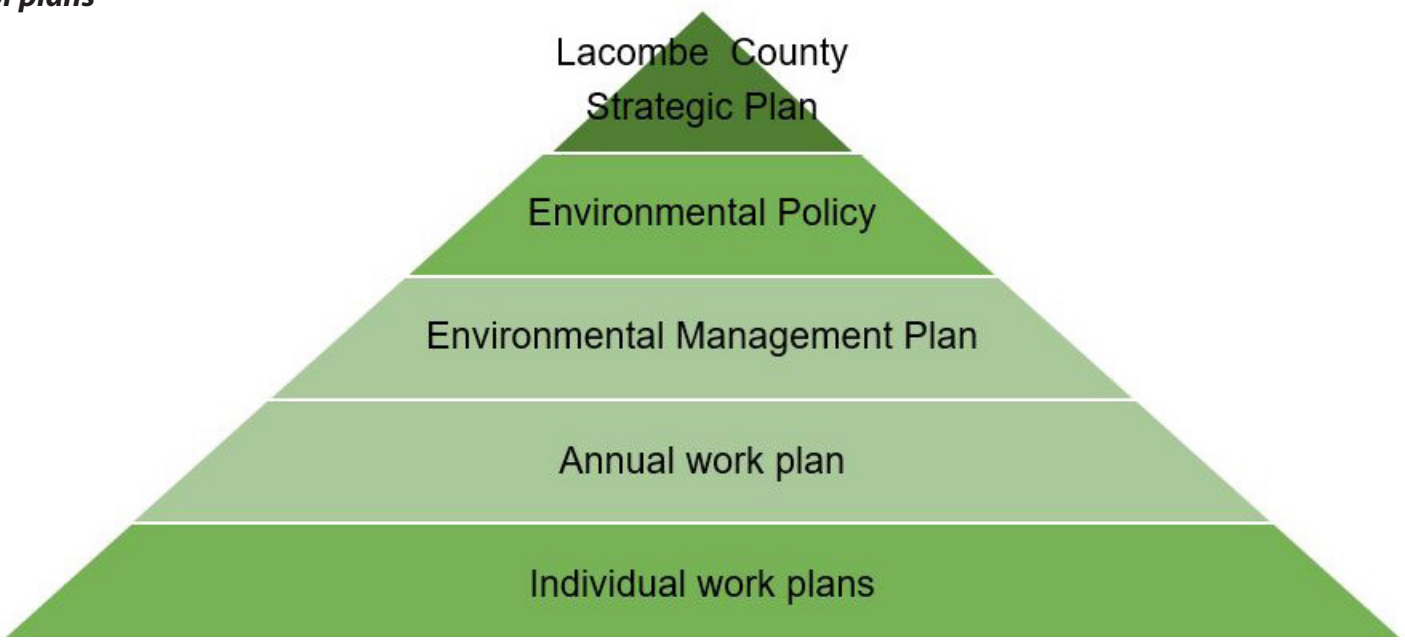
2.2. Revising EMP Implementation

The first EMP described a policy hierarchy, as illustrated in Figure 1. This illustration shows how the EMP fits into overarching policies, but only describes implementation in broad terms, and lacks a mechanism to incorporate EMP priorities into day-to-day activities.

2.3. Revising EMP Priorities

An EMP is a multi-purpose document, serving as both a statement of intent and action plan. The original EMP identified five areas of environmental management as priorities. The intent was that the EMP would address one to two priority areas every two years, which would "[allow staff to] become familiar with each priority area without overwhelming workloads or the desire to change" (Lacombe County, 2013). Each priority had corresponding 6-month, 1-year, and 2-year goals. Goals were further broken

Figure 1. Original EMP hierarchy of plans



into targets, indicators, and metrics. These categories, listed in no particular order, included the following:

- Water Quality
- Waste Creation and Disposal
- Efficient Use of Water
- Energy Consumption
- Land Use in the Built and Natural Environment

The previous EMP's goals, targets, and metrics were often under-specific and difficult to qualify and/or quantify. Therefore, revised EMP goals and targets make the EMP more readable, approachable, and achievable.

Overall priorities also need to be updated. One such adjustment includes the addition of "Climate Impact Adaptation and Mitigation" as an EMP priority. Lacombe County will be affected by changes to the climate, and so must seek policies and initiatives to predict and cope with coming changes. Lacombe County will therefore strive to be a credible contributor to mitigating climate change where it is both possible and practical.

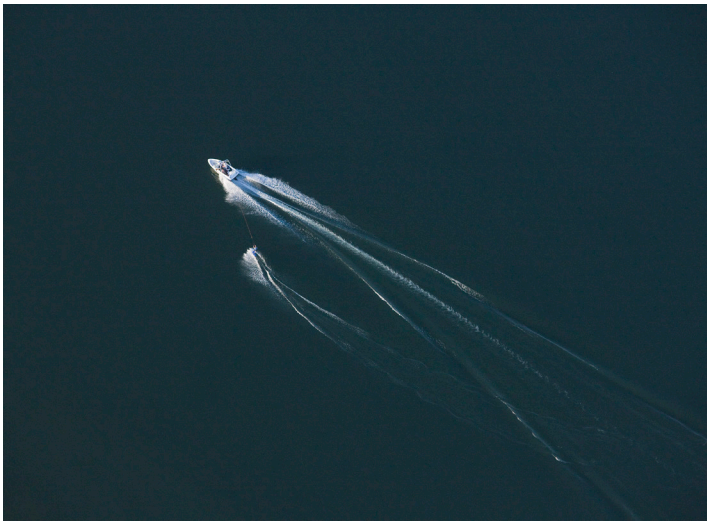
The second major change is to combine of "Water Quality" and "Efficient Use of Water." Water use generally leads to the alteration of clean, drinking water into runoff, grey water, or black water, which then requires management/treatment. In addition, available climate data suggests that Lacombe County will warm approximately 3°C by 2050 even under optimistic scenarios, causing lower growing season precipitation (All One Sky Foundation, 2018). Climate therefore contributes to uncertainty in water management, contributing to predictions of water scarcity and increased severe weather events. The previous water related EMP priorities are therefore combined into "Water Quality and Security" to better describe the scope of the priority.

SUMMARY OF EMP PRIORITIES

3.1. EMP Priorities

Because Lacombe County is committed to a sustainable and vibrant environment, there are specific facets of environmental management that have emerged as priorities. The five new priorities are:

- Energy Efficiency
- Waste Creation and Disposal
- Land Use in the Built and Natural Environment
- Water Quality and Security
- Climate Adaptation and Mitigation



3.2. Priority Management

The County will set a five-year end-date for revisiting its EMP goals and targets, with regular internal progress/data reviews on each. The previous EMP sought to address individual priorities over time, with one or two priorities addressed per year. As stated earlier, this EMP seeks to recognize environmental management as a holistic task; goals tend to overlap. Therefore, Lacombe County will seek to treat each priority as an ongoing management issue, as opposed to treating EMP priorities as a list of tasks.

The County will strive to improve our performance in these categories internally, and will continue to hold high standards for environmental stewardship externally where applicable.

3.2.1. Energy Efficiency

Purpose: By minimizing energy use, Lacombe County can decrease operating costs while also decreasing our environmental impacts. Wherever economically feasible, the County will seek to adopt alternative energy generation technologies to help minimize our footprint

Goal: Lacombe County shall adopt policies and promote initiatives that work towards decreasing energy use.

Target(s): To reduce net energy use at its buildings and fleet by 10% by 2025, as compared to the Lacombe County Energy Efficiency Assessment in 2015.

3.2.2. Waste Creation and Disposal

Purpose: To recognize that the current culture of disposable and single-use consumer products is unsustainable, and that landfills utilize otherwise productive land.

Goal: Lacombe County will work with its partners in the Lacombe Regional Waste Services Commission to promote waste reduction initiatives.

Target(s): To continue to publically acknowledge waste management as an ongoing environmental management issue; to treat waste management as an ongoing educational pursuit; reduce the waste created within the County day to day activities.

3.2.3. Land Use in the Built and Natural Environment

Purpose: By incorporating long-term thinking into land use decisions, Lacombe County will seek to sustain a healthy, liveable, and enjoyable environment for its current and future residents.

Goal: To protect and retain sensitive areas for recreation and ecosystem services, and to restore ecosystem services where they may be regained or enhanced by reclamation.

Target(s): Participate in the Alberta Environment and Parks wetland replacement program and construct at least one new wetland within the County (if suitable locations are identified) by 2024; promote education to ratepayers about sustainable land-use practices.

3.2.4. Water Quality and Security

Purpose: To prepare Lacombe County for the possibility of future water shortages and to promote sustainable water usage.

Goal: To adopt best practices for water management, including storm water, sewage, and grey water managements.

Target(s): Identify areas where water usage can be decreased and implement changes; promote education to staff, Council, and ratepayers on sustainable water usage; eliminate the use of single-use plastic water bottles within our facilities by 2022.

3.2.5. Climate Change Adaptation and Mitigation

Purpose: To help prepare and protect County ratepayers from predicted adverse changes in the local climate, and to enhance Lacombe County's reputation as a leader in environmental management.

Goal: To adopt measures for climate impact adaptation to prepare for the future to come, to demonstrate leadership by minimizing our contribution(s) to climate change.

Target(s): Decrease Lacombe County's operational carbon footprint by 5% over 5 years as compared to 2020 numbers; draft a Climate Trends Policy; educate staff, Council and ratepayers about local climate trends.

3.3. Environmental Action Plan

Rather then creating list of tasks at one point in time, an Annual Environmental Action Plan (EAP) will be drafted to identify projects or practice changes that help us to meet our goals/targets in our priority areas. The EAP will include input from County staff and Councillors. The EAP will attempt to have at least one project or practice change each year for each of our priority areas. The Annual EAP will include the following categories:

- Project Name
- Project Summary
- Timeline
- Priority Area(s)
- Resources Required
- Project Working Group

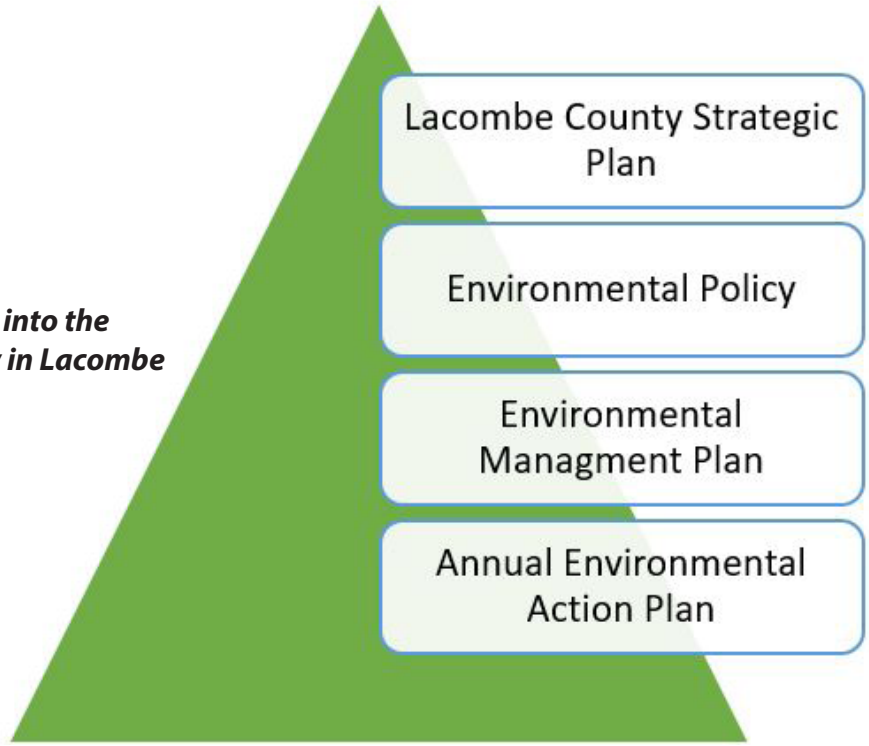


Figure 2. Illustrates how the EAP will fit into the Environmental Management hierarchy in Lacombe County.

EVALUATION OF ENVIRONMENTAL MANAGEMENT

4.1. Evaluation of Environmental Management

To evaluate whether the County is meeting goals and targets within our priority areas we will utilize an "outcome hierarchy" as outlined in Does Your Project Make a Difference? developed by the State Department of Environment and Conservation (NSW), 2000. An outcome hierarchy is an ascending (you read the table from bottom up) hierarchy system, which describes Needs through to Ultimate Outcomes in a logical chain of cause and effect.

Outcome Hierarchy	Definitions and Example
Ultimate Outcomes	Describe the impact of the overall program and the ultimate program goals. *e.g. Reduced stormwater pollutants at the source, and improved water quality of creek.*
Intermediate Outcomes	Describe the changes in individual and group knowledge, skills, attitudes, aspirations, intentions, practices, and behaviours. *e.g. Change in behaviour in community members*
Immediate Outcomes	Describe levels and nature of participation and reaction to the activities to engage participants. *e.g. Raised community awareness of daily activities that can impact on stormwater quality*
Activities	Describe the activities (products, outputs, and/or services) that the program will utilize to meet outcomes. *e.g. Staff engagement, media, education, working groups, hands-on activities, and/or events.*
Needs	Describe the priority issues/problems that the program must respond to, based on existing information. *e.g. Source control of stormwater pollutants*

STATE OF THE ENVIRONMENT REPORTING

5.1. Previous State of the Environment Reporting

Lacombe County has been releasing a publically available State of the Environment (SOE) report annually since 2013. This report began as a measurement tool, emphasizing the use of a "scientific approaching [focusing] on analysing available data to identify and assess changes in the environment over time" (Lacombe County, 2013). The SOE reporting was such that annual reports would provide incremental updates about Lacombe County's environmental policies and activities (i.e. metrics). Every five years the SOE report would provide a comprehensive summary of all environmental policies and activities since the last major SOE report. The comprehensive SOE reports were intended to provide opportunity for reflection on EMP indicators (i.e. long-term trends from metrics), and provide direction for redirection of the EMP.

The SOE publication initiative has been noteworthy, and communicated Lacombe County's commitment to providing transparent and accountable leadership. The 2013 SOE report particularly helped comprehensively describe environmental parameters in the County. That being said, SOE reporting also requires revision.

5.2. Revised State of the Environment Reporting

5.2.1. Publishing Schedule

SOE reports shifted in scope over time to a format wherein County departments were providing updates on internal activity. These reports became highlight documents, enabling Lacombe County to point to its environmental management successes. However, environmental management is a long-

term process wherein policies and/or initiatives must move slowly and deliberately to affect substantial change. Naturally, the SOE reports therefore changed relatively little year-to-year. Therefore, SOE reporting will follow a revised schedule, as follows:

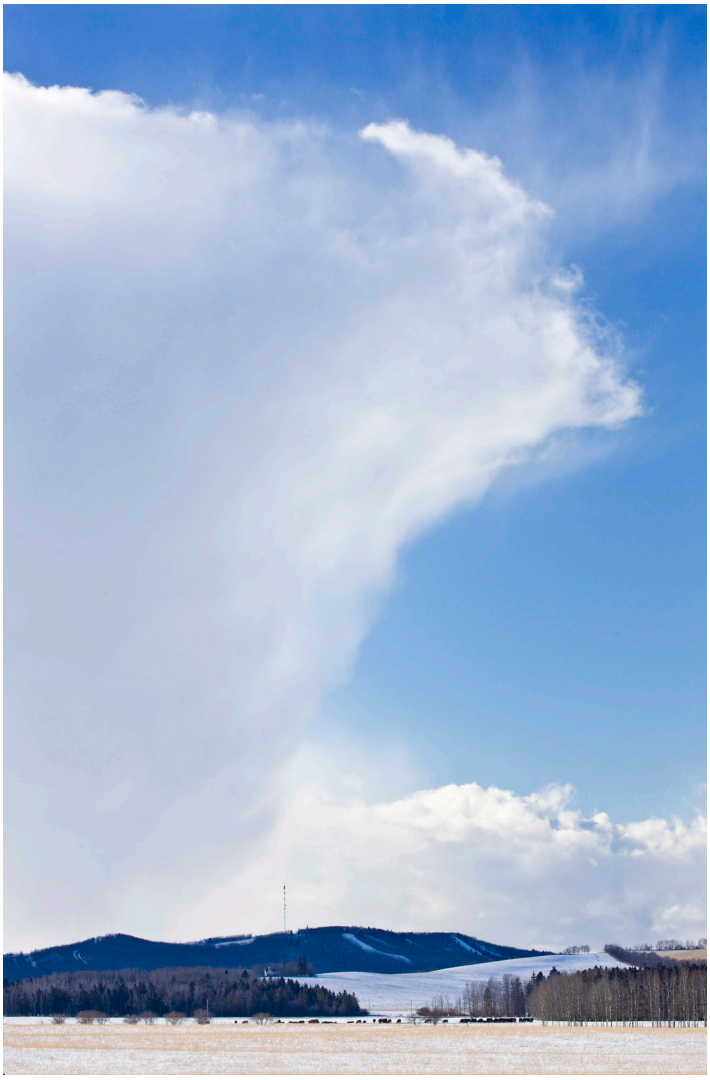
- Incremental reports every year
- Comprehensive reports every five years

This schedule will still ensure that Lacombe County is a leader among rural municipalities, regularly reporting its activities and policy direction(s) to its ratepayers and the public.

5.2.2. Emphasizing a Broad Context

As has been previously emphasized, environmental management is a multi-faceted task where individual policies and/or initiatives may have effects in multiple areas. It is therefore informationally complex to make the best possible choices for environmental management. It is also sociologically complex because there are so many stakeholders involved in managing the environment. The environment has no bounds, and so we share issues with many others at any given time. Therefore, it will be important going forward to look outward for cooperation and/or guidance. The SOE report will benefit from input from the following suggested sources:

- Municipalities within Lacombe County
- Neighboring municipalities
- External expert consultation
- Undergraduate case-study and/or scholarship competition(s)
- Industrial/commercial County stakeholders



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